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AUTHOR	Topping, James R.; Miyataki, Glenn K.
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ABSTRACT

The Program Classification Structure (PCS) has been widely disseminated throughout the higher education community to provide a consistent means of identifying and organizing the program elements of higher education institutions. This technical report identifies, describes, and categorizes quantitative indicators into 6 program measures groups that provide information about each PCS program element as follows: (1) resource measures provide data on the personnel involved, the facilities and equipment utilized, and the supplies and services consumed; (2) financial measures indicate the funds obtained from various sources, the capital investment expenditures incurred for land, buildings, and equipment, and the operating expenditures spent for personnel, supplies and services; (3) beneficiary group measures describe the groups of people who benefitted; (4) target group measures identify the people, places or things toward whom or at which the activities of the program element were directed; (5) activity measures describe the types and levels of activities conducted; and (6) outcome measures indicate the outcomes or products generated as a result of the activities of the program element. (Author/HS)

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PROGRAM MEASURES

Technical Report 35

National
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Management
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PROGRAM MEASURES

TECHNICAL REPORT 35

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Gordon Ziemer

Director, Research and Development Program:
Robert A. Wallhaus

Director, Applications and Implementation
Program:
Robert A. Huff

Program Associate:
John Minter

Communication Associate:
Joanne E. Arnold

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. . . to expand the supply of specialized manpower in the West.

. . . to help universities and colleges improve both their programs and their management.

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- provide improved information to higher education administration at all levels.
- facilitate exchange of comparable data among institutions.
- facilitate reporting of comparable information at the state and national levels.

PROGRAM MEASURES

Technical Report 35

This document has been reviewed and approved for publication by the NCHEMS staff, the Program Classification Structure Task Force, and the NCHEMS Technical Council. This publication does not necessarily reflect official positions or policies of NCHEMS, WICHE, or the Office of Education.

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PROGRAM MEASURES

Technical Report 35

James R. Topping

Glenn K. Miyataki

February 1973

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National Center for Higher Education Management Systems
at Western Interstate Commission for Higher Education
P. O. Drawer P Boulder, Colorado 80302

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WARRANTY

The Program Measures document has been developed by the Program Classification Structure Task Force in conjunction with James Topping and Glenn Miyataki of the NCHEMS staff. John Keller, consultant to the State of Hawaii, Department of Budget and Finance, was consultant to the project.

Program measures are intended to aid institutional users of the NCHEMS Program Classification Structure (Technical Report 27) (PCS) by providing the categories of information that describe program elements.

This document also provides some alternative suggestions for structuring information for analysis purposes.

However, it should not be construed as a manual that describes standardized procedures for conducting analyses; neither is it specifically addressed to program budgeting systems. It is cautioned that the use of program measures with the PCS does not necessarily assure comparable information.

This document is being sent to all NCHEMS participating institutions and agencies. Please circulate this technical report within your organization to those who might be in the best position to review it critically. Any constructive comments or suggestions regarding the improvement of these program measures will be greatly appreciated. Please submit your responses by July 1, 1973.

ABSTRACT

The Program Classification Structure (PCS) (Gulko, 1972) has been widely disseminated throughout the higher education community to provide a consistent means of identifying and organizing the program elements of higher education institutions. As mentioned in the PCS (pp. 3-12), the structure can be used in various analytic methodologies, such as program budgeting, analytical models, or information exchange procedures, that aid higher education planning and management. However, in order to facilitate the analyses of program elements, the information items that describe each program element within the PCS must be articulated.

This technical report identifies, describes, and categorizes quantitative indicators into six program measures groups that provide information about each PCS program element as follows: (1) resource measures provide data on the personnel involved, the facilities and equipment utilized, and the supplies and services consumed; (2) financial measures indicate the funds obtained from various sources; the capital investment expenditures incurred for land, buildings, and equipment; and the operating expenditures spent for personnel, supplies, and services; (3) beneficiary group measures describe the groups of people who benefited; (4) target group measures identify the people, places, or things toward whom or at which the activities of the program element were directed; (5) activity measures describe the types and levels of activities conducted; and (6) outcome measures indicate the outcomes or products generated as a result of the activities of the program element.

In addition to specifically attaching the program measures to the PCS, this document consists of a discussion on alternative ways of structuring information for analysis. The discussion is meant to promote a speculative note regarding the further development and use of structures and measures in analyzing information for the planning and management of higher education.

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Mr. T. C. Burnette
University Registrar
State University of New York
at Albany

Mr. Stephen F. Jablonsky
Director, Short-Range Planning
and Control
University of Illinois

Dr. George Kaludis
Vice-Chancellor
Vanderbilt University

Dr. Robert S. Lamson
Boeing Computer Service, Inc. (presently)
Vice-President for Planning and
Budgeting (formerly)
University of Washington

Dr. Donald L. McDowell
Vice-President for Administrative
Affairs
Florida International University

Dr. T. Harry McKinney
(Technical Council Liaison)
Director, Planning Division,
Bureau of Higher Education
Michigan Department of Education

Mr. Gordon D. Osborn
Assistant Chancellor for
Management
State University of New York
at Albany

Mr. Donald E. Pearson
Assistant Director and
Acting Administrator
University of Rochester

Mr. Kenji Sumida
Coordinator, Planning and
Budgeting
University of Hawaii

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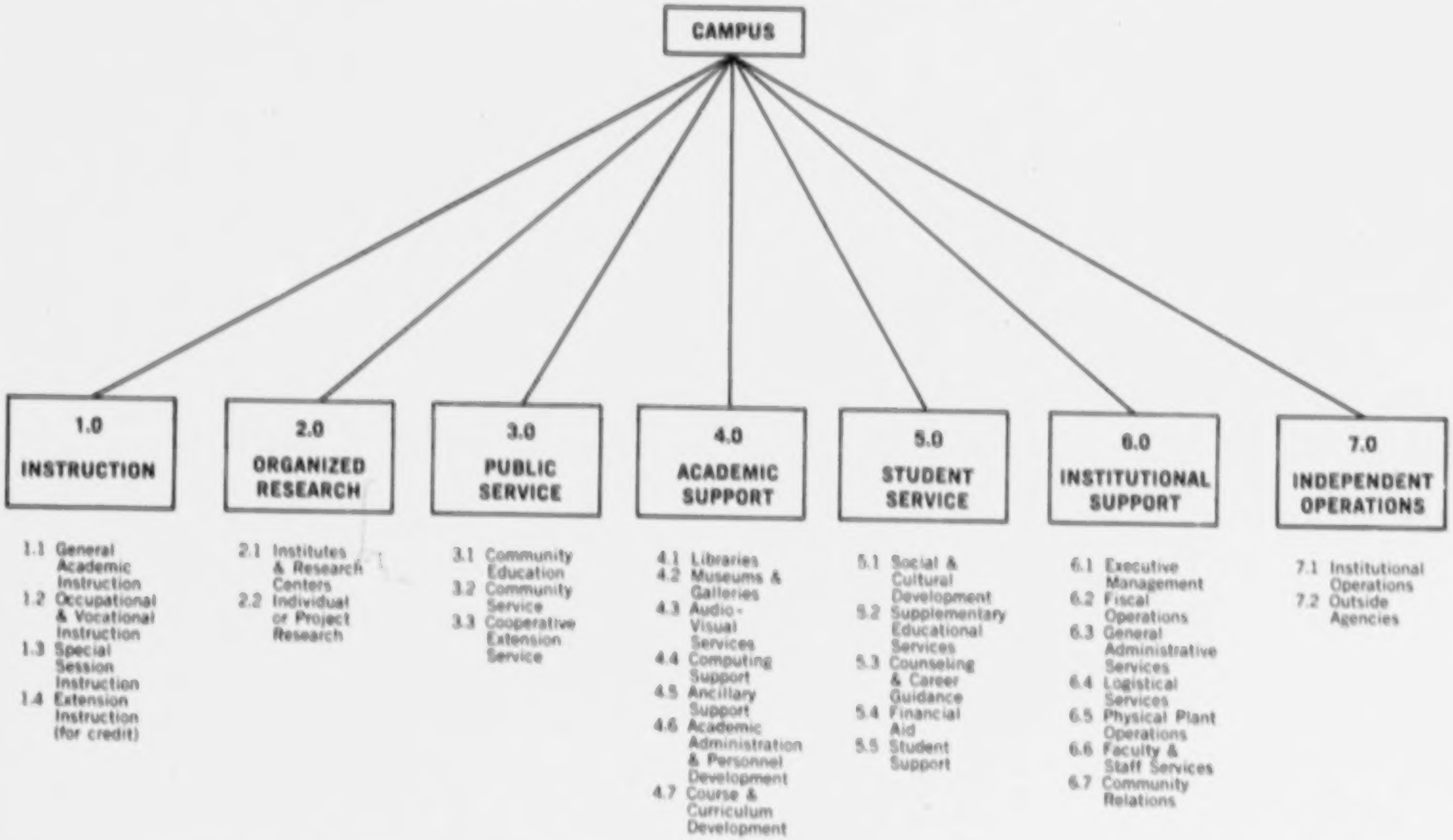
CHAPTER I

OVERVIEW

The National Center for Higher Education Management Systems (NCHEMS) has developed the Program Classification Structure (PCS) (Gulko, 1972), which has been widely disseminated to the higher education community. This structure provides a consistent means of identifying and organizing the activities of higher education institutions. Focusing upon the outcomes of various activities, the PCS organizes activities along lines that are reasonably consistent in terms of "primary intent." Viewed in this light, the PCS provides a framework for facilitating the process of identifying and measuring the results or contributions of activities (Lamson, 1972). Figure 1.1 specifies the major institutional programs and related subprograms of the PCS.

However, the structure alone is not sufficient to identify and analyze the content of higher education activities. In order to implement the PCS, various items of information are required to describe each element within the structure. For example, an activity identified by the PCS is "instruction in the Physics discipline at the lower-division level." But just to know the name of the activity is not enough. There is a need to identify the content of this instruction activity: the number of enrollments, the number of courses offered, the number of faculty assigned to teach the courses, etc. Therefore, descriptive information must be associated with the PCS in order

Figure 1.1. Organization of the Program Classification Structure


CAMPUS
1.0 INSTRUCTION
1.1 General Academic Instruction
1.2 Occupational & Vocational Instruction
1.3 Special Session Instruction
1.4 Extension Instruction (for credit)
2.0 ORGANIZED RESEARCH
2.1 Institutes & Research Centers
2.2 Individual or Project Research
3.0 PUBLIC SERVICE
3.1 Community Education
3.2 Community Service
3.3 Cooperative Extension Service
4.0 ACADEMIC SUPPORT
4.1 Libraries
4.2 Museums & Galleries
4.3 Audio-Visual Services
4.4 Computing Support
4.5 Ancillary Support
4.6 Academic Administration & Personnel Development
4.7 Course & Curriculum Development
5.0 STUDENT SERVICE
5.1 Social & Cultural Development
5.2 Supplementary Educational Services
5.3 Counseling & Career Guidance
5.4 Financial Aid
5.5 Student Support
6.0 INSTITUTIONAL SUPPORT
6.1 Executive Management
6.2 Fiscal Operations
6.3 General Administrative Services
6.4 Logistical Services
6.5 Physical Plant Operations
6.6 Faculty & Staff Services
6.7 Community Relations
7.0 INDEPENDENT OPERATIONS
7.1 Institutional Operations
7.2 Outside Agencies

for it to be used at all. Moreover, these information items can be arranged or structured in a manner that will facilitate the process of analyzing higher education programs. These categories of information are collectively called "program measures."

The major objective of this document is to identify and categorize program measures. Specifically, the document attempts to identify, describe, and categorize that information which describes the program elements at each level within the PCS. Also, to allow for flexibility in the structuring of information for analysis purposes, alternative schemes of categorizing information are presented.

PCS and Program Measures

In essence, the program measures in this document were developed to facilitate the use of the PCS in various analytic methodologies. As discussed in the PCS (Gulko, 1972, pp. 3-12), some of these analytic tools and procedures are

- Program Budgeting
- Cost/Benefit Analysis
- Analytical Models
- Information Exchange Procedures
- Unit Costs of Instruction

In all of these, the use of program measures with the PCS facilitates the analysis of higher education activities. While the PCS provides the structure for identifying various levels of higher education activities, program measures provide the information items that describe each of those activities. Thus, without program measures, the PCS would be a "naked" framework. However, by "clothing" the framework with descriptors, the PCS can be used to accomplish its stated objectives.

Chapters II and III consist of the development, definitions, and descriptions of program measures. Chapter IV suggests alternative ways of structuring the information.

CHAPTER II

WHAT ARE PROGRAM MEASURES?

This chapter conceptualizes program measures and presents some considerations related to their use. First, the lowest level of data aggregation of the PCS, the program element, is defined and various information items that describe its components are identified. Second, these information items are grouped into information categories and a discussion of each information category follows. Third, groups of program measures are derived from the information categories. Finally, several considerations relating to the use of program measures are discussed.

Analysis of a Program Element

In this document, program measures are defined as *quantitative indicators of the resources utilized, the activity levels generated, the groups that were served and benefited, the expenditures incurred, the revenues generated, and the outcomes achieved by programs and program elements*.

This definition of program measures is derived from the analysis of a program element. By specifying the components of a program element, it becomes possible to identify the items of information that can describe a program element.

A program element has been defined as a "discrete management unit that may be thought of as a collection of resources, technologies, and policies that through integrated operation produce goods or services (i.e., an output) that is of value to the organization because it contributes to the achievement of an institutional objective" (Gulko, 1972, p. 14). The example of a program element illustrated in the Program Classification Structure was the introductory physics course, which is

1. a collection of resources and technologies (e.g., faculty, technicians, labs, and equipment);
2. integrated through a series of activities (e.g., lectures, labs, discussion sessions);
3. in a manner defined by a set of policies (e.g., lecture outline, lab manual, text);
4. to produce a specific output (e.g., an increased level of knowledge of the basic principles of physics for one or more students);
5. that contributes to an institutional objective (e.g., provide knowledge and learning).

In examining a program element in this fragmented manner, a series of questions emerges:

1. What is the objective of the program element?
2. What is the time frame in which the objective is to be accomplished?

3. What narrative information concerning the operations of the program should accompany the statement of the objective?
4. Toward whom or what is the program aimed or directed?
5. Who will benefit from the program?
6. What kinds and levels of activities are carried on within the program element?
7. What physical and human resources are required to carry on the specified activities?
8. What policies and technologies are employed within the program element?
9. How much will it cost to utilize the specified resources at a particular level of activity in accord with a particular technology?
10. Who will bear these costs?
11. Will the activities carried on within the program element generate any revenues?
12. What are the expected outcomes of the activities carried on within the program element?
13. To what extent do the outcomes of the program element's activities contribute to the achievement of the stated objective?

The information required to answer all of these questions is extensive. However, upon closer analysis, the information needed to comprehensively describe the program element can be arranged into several categories. Table 2.1 arranges these questions into information categories that provide the foundation from which program measures are developed.

TABLE 2.1: CATEGORIES OF INFORMATION DESCRIBING A PROGRAM ELEMENT

Information Category	Question
Objectives	1. What is the objective of the program element? 2. What is the time frame in which the objective of the program element is to be accomplished? 3. What narrative information concerning the operations of the program should accompany the statement of the objective? 13. To what extent do the outcomes of the program element's activities contribute to the achievement of the stated objective?
Target Group	4. Toward whom or what is the program aimed or directed?
Beneficiary Group	5. Who will benefit from the program?
Activity	6. What kinds and levels of activities are carried on within the program element? 8. What policies and technologies are to be employed within the program element?
Resource	7. What physical and human resources are required to carry on the specified activities?
Financial	9. How much will it cost to utilize the specified resources at a particular level of activity in accord with a particular technology? 10. Who will bear these costs? 11. Will the activities carried on by the program element generate any revenues?
Outcome	12. What are the expected outcomes of the activities carried on within the program element?

Categories of Program Information

Viewed in this manner, it can be assumed that all program elements or their aggregations can be described and analyzed in terms of these information categories. They are:

Information Category 1: Objectives

Specifying relevant objectives of a program element is a difficult but crucial task for the administrator of a program element. Objectives provide the direction for planning, managing, and analyzing the resources and activities of a program element. Objectives also provide guidelines for evaluating the outcomes of a program element.

Since the identification of objectives of a program element will uniquely reflect the desired outcomes for that program element, it is left to each institution to determine its program objectives and to evaluate the degree to which those objectives are accomplished.

Information Category 2: Target group

Information about target groups essentially identify the people, places, or things toward whom or at which the activities of the program are directed. For example, in a medical research program, the target group may be a particular disease, the persons susceptible or inflicted with the disease, or a location having the medically undesirable condition. Identifying the target group as a person, place, or thing depends upon the primary emphasis of the program activities.

Target groups may be determined through a process similar to "market" research. Administrators of instructional and public service programs may need to carefully estimate the total student demand or potential audience in their planned offering of a particular course. For example, the advocates of a planned course in literary criticism of Shakespeare's plays would need to specify how many graduate candidates in English might be reached, how many undergraduate English majors would be involved, and how many non-English majors would be attracted from other fields of study.

With the identification of target groups, the activities of a program element can be purposefully directed. In this way, target groups not only contribute toward the setting of objectives but also influence the resource- and activity-level mix that would result in outcomes serving the target groups.

Information Category 3: Beneficiary Groups

Information about beneficiary groups includes the description of who benefited or who will benefit from the program's activities. Beneficiary groups will usually consist of the individuals or groups of individuals who actually participate in the activities of the program element as target groups. However, in some cases, there will be other groups of beneficiaries who are not target groups of the program element. For example, in an elementary education teaching program, the candidates for a teaching degree are both the target group and beneficiary group. However, in addition to them, other groups which may benefit are the education community and the local community in which these teachers will be hired.

Information Category 4: Activities

Activities include such things as lecturing, experimenting, counseling, interviewing, cataloging, research, report writing, etc., and are aimed at or operate on specific persons, places, or things. The level and type of activities conducted will utilize resources, generate monetary costs (to acquire and use the resources), and contribute toward accomplishing outcomes of a program element. Information on activities describes the processes of a program element.

Information Category 5: Resources

This information category specifies the human and physical resources required to carry out the activities of the program, that is, how much of the existing and obtainable stock of resources will be consumed by the planned activities.

Information Category 6: Financial

Financial information provides a description of the costs and revenues needed to operate the program. Information on costs provide a one-dimensional measure of the financial sacrifice of acquiring and using resources. Costs therefore are a function of the kind, amount, and mix of resources used, the kind and levels of activity, and the policies, technologies, and constraints which govern those activities.

Information in this category is also needed to assess cost distinctions between amounts authorized for expenditure (appropriations or their equivalent) and amounts actually expended (expenditures). Specifically, information is required on the various objects of expenditure as well as explicit identification of sources of funding.

Information Category 7: Outcomes

Information about outcomes includes the outcomes achieved or the products generated by the activities of a program element. Outcomes information also enables an administrator to evaluate the effectiveness of a program element in terms of the degree that the outcomes met the objectives of the program element. What did the money buy?

Taken together, these information categories provide a picture of the program element generally complete enough to conduct analyses for planning and management purposes relating to specified periods of time.

Each of the above information categories, except "objectives" was designated by the PCS task force as a program measures group. Objectives are composite representations of the other categories and are usually formulated on the basis of reflections and judgments by those charged with determining the objectives. Therefore the task force decided to exclude "objectives" measures and concentrated its efforts on the other categories. Basically, each program measures group consists of a set of information items that were selected on the assumption that each information item could be uniformly specified in straightforward quantitative terms. Each program measures group is discussed in more detail in Chapter III. The general framework of program measures is shown in Figure 2.1.

Considerations in Using Program Measures

Program measures have been defined in terms of the program element, the lowest level of data aggregation within the PCS. However, just as program elements can be aggregated to higher levels in the PCS, the information associated with them, program measures, can similarly be aggregated. In fact, there may be a variety of circumstances in which it may be appropriate to deal with certain program measures only at a higher level of aggregation. For example, it may not be meaningful to identify the source of funding at the course level, while at the department level the use of financial measures to distinctly identify the source of funding may be important for planning purposes. Figure 2.2 indicates the levels of the PCS to which program measures may be attached.

Besides having various points of entry into a structure, program measures also can be associated with time dimensions. This document

Figure 2.1: GENERAL FRAMEWORK OF PROGRAM MEASURES

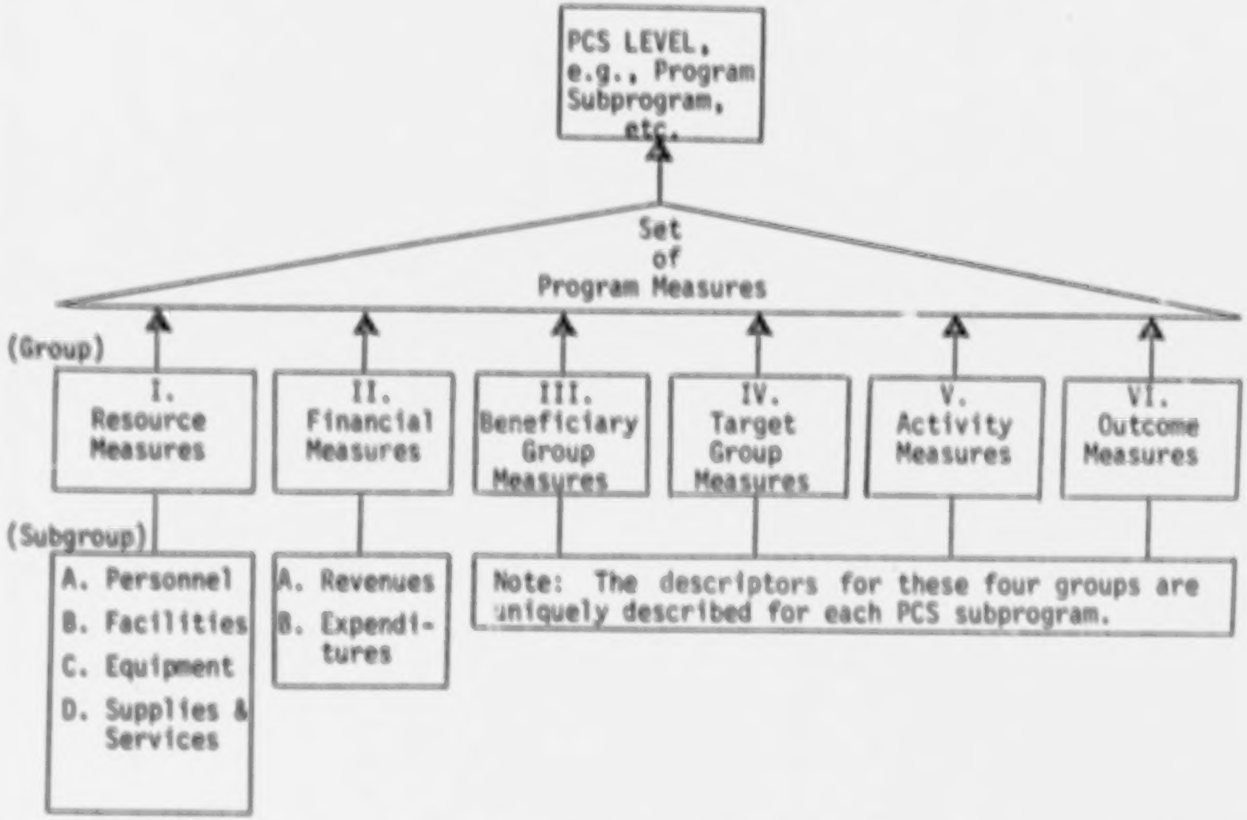
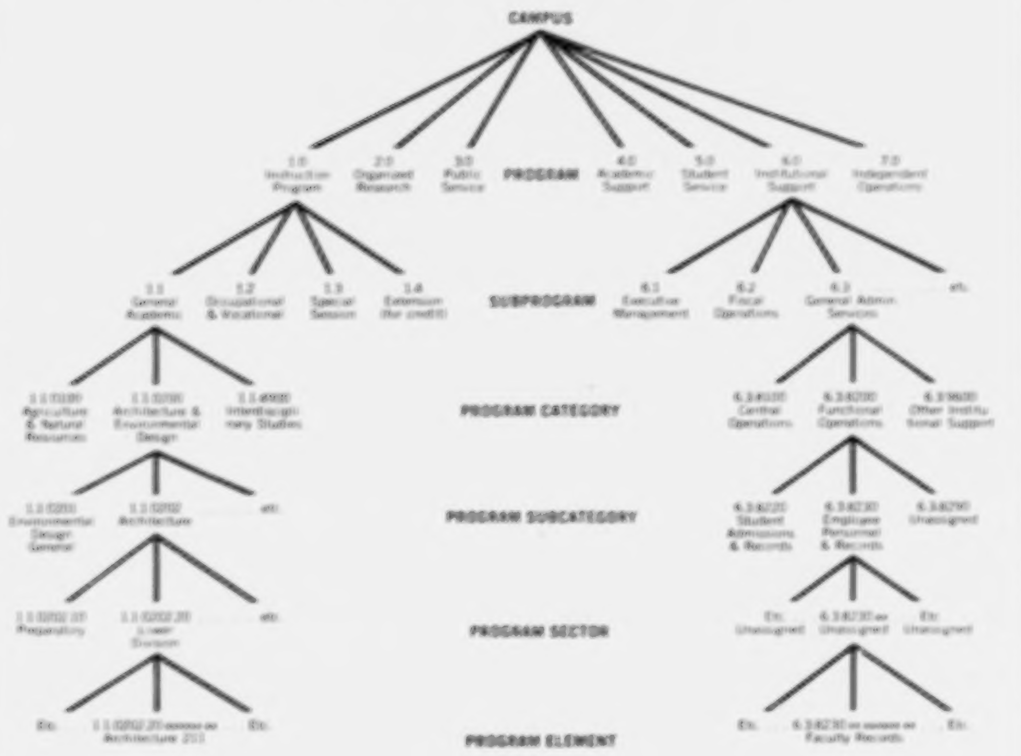

PCS LEVEL, e.g., Program Subprogram, etc.
Set of Program Measures
(Group)
I. Resource Measures
II. Financial Measures
III. Beneficiary Group Measures
IV. Target Group Measures
V. Activity Measures
VI. Outcome Measures
(Subgroup)
A. Personnel
B. Facilities
C. Equipment
D. Supplies & Services
A. Revenues
B. Expenditures
Note: The descriptors for these four groups are uniquely described for each PCS subprogram.

Figure 2.2 Levels of the Program Classification Structure


CAMPUS
1.0 Instruction Program
2.0 Organized Research
3.0 Public Service
PROGRAM
4.0 Academic Support
5.0 Student Service
6.0 Institutional Support
7.0 Independent Operations
1.1 General Academic
1.2 Occupational & Vocational
1.3 Special Session
1.4 Extension (for credit)
SUBPROGRAM
6.1 Executive Management
6.2 Fiscal Operations
6.3 General Admin. Services
etc.
Agriculture & Natural Resources
Architecture & Environmental Design
Interdisciplinary Studies
PROGRAM CATEGORY
Central Operations
Functional Operations
Other Institutional Support
Environmental Design General
Architecture
etc.
PROGRAM SUBCATEGORY
Student Admissions & Records
Employee Personnel & Records
Unassigned
Preparatory
Lower Division
etc.
PROGRAM SECTOR
Etc. Unassigned
Unassigned
Etc. Unassigned
Etc.
Architecture 211
Etc.
PROGRAM ELEMENT
Etc.
Faculty Records
Etc.

generally defines program measures as measuring past events: resources utilized, expenditures incurred, activity levels generated, etc. Nevertheless, to support the intended uses of the PCS in various analytical procedures, e.g., in a program budgeting mode, it is equally important for program measures to focus on expected events: resources expected to be utilized, expenditures expected to be incurred etc. Institutions should have the flexibility of distinguishing between planned or budgeted measures and actual measures, making it possible for program measures to be applied during different phases of program planning and management. In planning and budgeting modes, program measures would be expressed in terms of expectations; in execution and reporting phases, program measures would describe actual events. Throughout the balance of this paper, it must be recalled that program measures have a time dimension application, with the particular use determining which time dimension is appropriate.

Program measures are being developed for use by other NCHEMS project; Table 2.2 identifies these interrelationships. But this document will not address in detail all of these interrelationships and will concentrate only on the relationship between program measures and the PCS.

Another consideration is that these measures will be evaluated continually. In the course of utilizing them, institutions will distinguish those that are applicable from those not applicable to their situation. Similarly, changes in the higher education management process may suggest modifications and shifts of emphasis in these groups of program measures. The surveillance of these measures is an ongoing activity that must result in modifications suitable or relevant for the current situation.

Table 2.2: RELATIONSHIPS OF PROGRAM MEASURES WITH OTHER NCHEMS PROJECTS

[Jones & Kirschling, 1972]

Program Measures Contribute To

PROJECT	DESCRIPTION
Cost Finding Principles	Potential parameters for direct cost studies and for cost allocation and distribution.
HEGIS	Categorizations and definitions of program information to be potentially reported.
Information Exchange Procedures	Categorizations and definitions of program information to be potentially exchanged and reported.
Intra-Institutional Planning and Management	Categorizations and definitions of program information required for institutional planning and management.
Statewide Measures	Categorizations and definitions of potential statewide measures.

Program Measures Receive From

PROJECT	DESCRIPTION
Facilities Inventory Classification Manual	Categorizations and definitions of facilities resource program measures.
Faculty Activity Analysis	Categorizations and definitions of faculty activity measures.
Higher Education Finance Manual	Categorizations and definitions of financial measures.
Information Exchange Procedures	Definitions of selected program measures.
Manpower Accounting Manual	Descriptions and categorizations of personnel resource measures.
Outcomes	Identification of selected outcome measures.

Chapter II analyzed the program element as the conceptual basis for developing categories of program information. From the categories, six were identified as the groups of "program measures." Further, some major considerations in using these program measures were discussed. Chapter III will discuss the groups of measures in detail, and Chapter IV will describe alternative concepts of structuring information.

CHAPTER III

PROGRAM MEASURES GROUPS

This chapter provides a more detailed breakdown of the program measures groups. Wherever possible, the breakdown was accomplished by relying on existing categorization schemes. In addition to the discussion in this chapter, Appendixes A through C consist of the detailed lists of measures that are associated with each program measures group.

The task force, in arriving at the further categorizations of program measures, adhered to the following ground rule:

> Make the theoretical framework flexible enough to allow for future modifications and additions, but, in order to give the program measures immediate utility, use only those data categories that are commonly used by the majority of colleges and universities today.

Resource Measures

Resource measures quantitatively express the physical and human resources utilized within a program element during a stated time period. Only those resources that are allocated and managed in terms of physical units should be included in this subgroup. Physical units include such units of measure as square feet, number of items, full-time equivalents, etc. Dollar units will not be considered a physical unit, but will be solely used as a unit of measure for the financial measures group. Most resources can be accounted for in two ways -- in physical units, that is, resource measures, and as dollar units of expenditure for the utilization of resources, that is, financial measures. Take, for example, a faculty member who is assigned to perform certain tasks such as teaching a course or serving on a departmental committee. His time can be budgeted both in terms of a percentage of a full-time equivalent (FTE) position assigned to a specific program element and in terms of dollars (the FTE percentage multiplied by his salary for the academic terms). Likewise, facilities can be budgeted in terms of assignable square feet (ASF) or number of stations (resource measures) and as capital expenditures for land, buildings, and equipment (financial measures). Subgroups within the resource measures are

A. Personnel
B. Facilities
C. Equipment
D. Supplies and Services

Each of these major resource subgroups can be further subdivided to provide the level of detail that is needed for budgeting and management purposes within a program element.

A. Personnel

The personnel resource measure is too inclusive to be used effectively as a budgeting or accounting category at the program element level. Therefore, a personnel classification scheme is suggested that provides a comprehensive set of categories whereby all faculty and staff assignments within an institution can be related to institutional programs. Following the categorization scheme developed in A Manual for Manpower Accounting in Higher Education (Minter, 1973), personnel resources are described as follows:

1.0 Executive-Administrative-Managerial
2.0 Instructional
3.0 Professional (research, business, health, etc. not classified as Administrative or Instructional)
4.0 Technical
5.0 Office
6.0 Crafts and Trades
7.0 Service

The term "personnel" is defined as the body of persons employed by the institution. An occupational activity represents the principal ability or skill required by a work assignment. An employee assignment encompasses a set of activities an employee is expected to perform within a program established to accomplish some institutional goal. The Manual for Manpower Accounting arranges the above personnel categories by occupational activities rather than by job titles. This arrangement allows for the proration of job positions to one or more of the occupational activities. The occupational activities can be further described by the complexity and responsibility associated with the task. Appendix A, Section 1, contains a complete listing of the occupational activities categories together with definitions and examples of each.

B. Facilities

The term "facilities" encompasses all of the institution's requirements for land, improvements, and buildings in conducting its primary and support programs. The resource measures associated with buildings are expressed in assignable square feet or number of stations and are based on the standard facilities and room use classifications adopted in the Higher Education Facilities Inventory and Classification Manual (Romney, 1972). Appendix A, Section 2, contains a definition, a description, and limitations for each of the room use classifications. For land and improvements, resource measures are specifically described and accounted for in terms of acres, number of parking spaces, and other appropriate physical units.

The method of financing used to acquire facilities should remain segregated from the resource measure itself. For example, a facility may be constructed and maintained by the institution or contracted for through a lease agreement with an outside agency. In either case, a facility's resource measure (the number of assignable square feet or the number of stations) is identical for budgeting and accounting purposes. There is no difference in the room use codes assigned to lease space as opposed to owned space.

C. Equipment

The term "equipment" is defined as all movable property (that which is not permanently attached to a structure) that has a useful life of more than one year and a cost above an institutionally defined minimum. Circular No. A-21, written by the federal Executive Office of Management and Budget for the purpose of reimbursing educational institutions for their costs relating to government supported research grants and contracts, suggests a minimum equipment cost of $200.00. The subgroup "equipment" excludes all items that are consumed or used up during a normal operating cycle. Items that are normally considered equipment and are budgeted in terms of individual physical units as well as dollars include: computer hardware, motor vehicles, and expensive laboratory and office equipment. A representative listing of equipment, adapted from the list of State University System of Florida, is included as Appendix A, Section 3. As with facilities, the method of financing should be divorced from the resource measure.

D. Supplies and Services

This subgroup encompasses all resources related to program elements which have not been covered in the other subgroups of resource measures. Typical resources assigned to the supplies and services subgroup would be books and periodicals, office and instructional supplies, telephone and other utility services, travel and conferences, and various contractual services (typewriter maintenance, copy machine rental, etc.). For many of these resources, the institution's primary measurement will be in monetary terms ($100 worth of pencils rather than 10 gross of pencils) and therefore will be reflected only as a financial measure. However, there are various institutional needs which make physical unit measurement important. For example, in computer center management, the number of available magnetic tape reels may be important; measurement of the book and periodical inventories may be essential to the library operation and bookstore management; the power plant capacity in BTUs or KVAs may be crucial for physical plant planning.

This subgroup provides the opportunity for unit measurement of supplies and services resources as deemed appropriate by the institution. A general classification of the major types of supplies and services can be found in Appendix A, Section 4. It is anticipated that individual institutions will establish further breakdowns of these classifications as necessary.

Financial Measures

Financial measures quantitatively express in dollar amounts the source of funds and expenditures for physical and human resources utilized at a specified level of activity within a program element during a stated time period. The subgroups of financial measures are

A. Revenues

B. Expenditures

Each of these subgroups is further subdivided to provide the level of detail necessary for planning and management purposes.

A. Revenues

Revenues are received by the institution from the following kinds of action:

- The rendering of services measured by the charge made to students, sponsors, and others.
- Gains from the sale or exchange of current fund assets.
- Interest and dividends earned on investments.
- Sale of goods.
- Other increases arising from or for the support of current fund operations, for example, gifts, gifts applied, and appropriations (American Council on Education, 1968).

Cash receipts resulting from interfund transfers, loans, and similar transactions should not be classified as revenues.

Revenues are typically categorized by the sources from which the funds are received. Most colleges and universities use the categories set forth in College and University Business Administration (CUBA) (American Council on Education, 1968). These revenue categories have also been adopted for reporting purposes by the National Center for Educational Statistics (NCES) in their annual Higher Education General Information Survey (HEGIS). Another list of categories is currently being explored by NCHEMS in their

Higher Education Finance Manual (HEFM) project for possible use in various products. Both lists are displayed in Table 3.1. Descriptions of these sources of funds are annotated in Appendix B. It should be noted that institutions will usually have more detailed categories within these lists.

B. Expenditures

The expenditures subgroup consists of the measures that quantitatively express the dollar cost of goods delivered or services rendered, whether actually paid or unpaid, for the operation of an institution and for additions to its plant (American Council on Education, 1968). Expenditures reflect the costs to the institution of acquiring the necessary human and physical resources to conduct the specified activities within its program elements.

Expenditures are divided between one-time capital investment expenditures (those necessary to bring the program element into existence) and ongoing operating expenditures (those necessary for the program element to engage in day-to-day functioning). Capital investment expenditures are one-time expenditures for physical resources that will benefit a program for more than one operating period. Operating expenditures, on the other hand, reflect the expenditures for physical or human resources that are totally consumed or utilized by a program within one operating period. The utility of certain types of resources, such as office or laboratory supplies, may in fact extend beyond one fiscal period. However, for reasons of practicality they are expended in most institutional accounting systems in the year of purchase.

TABLE 3.1: LISTS OF SOURCES OF FUNDS

The following categories are those recommended in *College and University Business Administration* (ACE, 1968) [Martin, 1972] and are currently being used by HEGIS.

Category

- Educational and General
  - Student Tuition and Fees
  - Governmental Appropriations
    1. Federal
    2. State
    3. Local
  - Endowment Income
  - Gifts (or Gifts Applied)
  - Sponsored Research
    1. Governmental
    2. Nongovernmental
  - Other Separately Budgeted Research
  - Other Sponsored Programs
    1. Governmental
    2. Nongovernmental
  - Recovery of Indirect Costs - Sponsored Programs
  - Sales and Services of Educational Departments
  - Organized Activities Related to Education Departments
  - Other Sources
  - Student Aid
  - Auxiliary Enterprises

HEFM Sources of Funds

Category

- Tuition and Fees
- Government Appropriations
  - Federal
  - State
  - Local
- Government Grants and Contracts
  - Federal
  - State
  - Local
- Private Grants and Gifts
- Investment Income
  - Endowment Income
  - Other Investment Income
- Auxiliary Enterprises
- Sales and Services of Educational Departments
- Organized Activities Related to Educational Departments
- Proceeds on Sales of Capital Assets
- Other Sources

Capital Investment Expenditures

A distinction needs to be made at the outset between capital investment expenditures and capital costs. As previously defined, capital investment expenditures are one-time expenditures for physical resources that will benefit a program for more than one operating period. On the other hand, capital costs represent the valuation placed upon the services provided by land, buildings, and equipment owned and utilized by an institution during a given time period. For example, if a building is constructed for $500,000, that expenditure is a capital investment expenditure in the year the building was constructed. The capital cost, on the other hand, for some subsequent fiscal period may be estimated to be $35,000 (the total of a $10,000 depreciation charge plus $25,000 which represents the opportunity cost of the undepreciated asset value). Keeping this distinction in mind is essential when using the financial measures.

Broadly conceived, investment expenditures can include startup expenditures for program research and development and the initial training of personnel as well as the more generally recognized capital investment expenditures for land, buildings, and equipment. However, the Program Classification Structure provides a subprogram, Course and Curriculum Development (4.7), that enables the institution to segregate the planning and developmental activities for future instruction programs, and another subprogram, Academic Administration and Personnel Development (4.6), that accounts for the costs of personnel development activities. Therefore, for the purposes of this document, investment expenditures are restricted to capital outlay, that is, expenditures for land, buildings, and equipment. The categories for these measures parallel the "facilities" and "equipment" resource measures (See Appendix A, Sections 2 and 3).

1. Land and Improvements. Includes all expenditures associated with the acquisition and subsequent improvements of land by the institution. Improvements to land include streets, roads, sidewalks, bridges, outside lighting, irrigation systems, trees, plantings, landscaping, parking lots, fencing, and improvements to athletic fields and recreational areas.

2. Buildings. Includes all expenditures associated with the acquisition or purchase of buildings in which the institution conducts its programs. "Buildings" refers to facilities permanently affixed to land and the remodeling of such facilities, including the associated heating systems, electrical systems, fixed equipment, plumbing systems, and sewers.

3. Equipment. Includes the purchase price of all movable property (that which is not permanently attached to a structure) that has a useful life of more than one year and a cost above an institutionally defined minimum. The set of items considered as equipment can be treated as both resource and financial measures. As resources, they are accounted for in physical units; as financial measures, their associated capital expenditures are measured in dollars.

Operating Expenditures

As previously defined, operating expenditures reflect the expenditures for physical or human resources that are totally consumed or utilized by a program within one operating period. For the purposes of this document, operating expenditures will be classified into two categories -- personnel, and supplies and services.

1. Personnel. Includes those expenditures incurred in payment for services rendered to the institution by its employees. The categories for personnel parallel those of the resource measures that were adopted from the Manual for Manpower Accounting (Minter, 1973; see Appendix A, Section 1). Costs included are:
   - The gross cash salary of the individual from all institutional sources before deductions or exclusions.
   - Staff benefits, directly and explicitly identifiable with the individual as to dollar amount or value, including:
     - Employer's FICA contribution;
     - Employer's contribution to TIAA-CREF or state or other retirement fund;
     - Employer's share of medical, hospital, accident, or life insurance premiums;
     - Market value of goods or services provided to the employee for personal use or consumption, e.g., housing, food, servants.

2. Supplies and Services. The financial counterpart of the resource measures subgroup called Supplies and Services. It is expected that most institutions will manage the majority of their supplies and services in financial terms rather than in physical units. Objects of expenditure would normally include:

- Instructional and research supplies
- Office supplies
- Janitorial, cleaning, and laundry supplies
- Utilities, including gas, electricity, water, and fuel
- Maintenance of plant and equipment
- Communications, including telephone, telegraph, postal, printing, binding, and reproduction services
- Computer services
- Insurance, property and liability
- Other contractual services: services not otherwise classified, including consulting services
- Staff travel and relocation allowance
- Rental of land, buildings, and equipment

A listing of object categories for Supplies and Services parallels those of the resource measures group and can be found in Appendix A, Section 4.

Beneficiary Group Measures, Target Group Measures, Activity Measures, and Outcome Measures

The four remaining groups of program measures are defined as follows:

- Beneficiary group measures identify and quantitatively describe the people or groups of people who benefit directly or indirectly from either the activities or outcomes of a program element during a stated time period.

- Target group measures identify and quantitatively describe the people, places, or things toward whom or at which the activities of a program element are aimed or directed during a stated time period.

- Activity measures describe a process, expressing quantitatively the level and type of operations carried on within a program element during a stated time period.

- Outcome measures quantitatively express the outcomes achieved or the products generated by the activities of a program element during a stated time period.

The subgroups of resource and financial measures have general applicability to all program elements wherever they might appear in the Program Classification Structure (refer to PCS Figure 1.1), and, therefore, the use of existing categorization schemes was possible.

However, beneficiary group, target group, activity, and outcomes measures are not amenable to subdivision into measures that have general applicability, and they have therefore been uniquely described within each subprogram of the PCS. Lists of these measures are shown in Appendix C.

A final word must be said about outcomes measures. Because the development of a full range of valid outcome measures is a difficult, sensitive, and long-term job, this document will confine itself to those measures about which there is a reasonable degree of existing agreement. A separate NCHEMS project entitled Outcomes of Higher Education is examining the entire range of potential outcomes of higher education with the intention of helping planners and decision makers identify and measure the outcomes and benefits derived from program activities. For example, within the general area of student growth and development, outcome variables have been identified for intellectual and skill development, career development, social development, and personal development. Potential indicators or measures that reflect several of those outcome variables are included in the lists of Appendix C. NCHEMS views the Outcomes Project as an attempt to expand the very limited boundaries that presently exist in the development and use of information about higher education outcomes in planning and management. Appendix D contains the latest draft of the Inventory of Higher Education Outcome Variables and Measures.

CHAPTER IV

STRUCTURED INFORMATION FOR ANALYSIS

In the preceding chapters, a structure of higher education activities (PCS) was identified along with the categories of information (program measures) that describe the program elements within that structure. This structure and the associated program measures are summarized below:

STRUCTURE	PROGRAM MEASURES					
PCS Program by PCS Levels	Resources	Finan-cial	Beneficiary Groups	Target Groups	Acti-vities	Out-comes
Instruction						
Organized Research						
Public Service						
Academic Support						
Student Service						
Institutional Support						
Independent Operations						

(See Appendix E for a display of program measures based on this conceptualization.)

But this is only one way of presenting information. The purpose of this chapter is to present some alternative schemes for organizing information that will facilitate analyses. The structuring of information into different formats will support various types of analyses. Also, the speculative nature of these alternative schemes may open other avenues of thinking about developing structures and measures for analyzing data. It should be noted that there is no one best scheme, but that each might serve a different purpose for an institution.

Participants-Resources Concept

Information about institutional activities might be reflected in a perspective that emphasizes participants and resources entering into the activity. (In terms of the PCS program measures, participants can be likened to target group measures while resources can be related to resource measures.) Information organized in this way answers questions such as: Who are the participants in the process? What resources are utilized in the activities? What happens to participants and resources during and after the course of the program activity? What characteristics do participants and resources bring to the process? Within what time frames are these participants and resources involved? Did the actual events approach the expectations of planning and budgeting? The information needed to answer questions of this nature can be structured as follows:

PCS STRUCTURE	TIME PHASE	PARTICIPANT			RESOURCE		
		ATTRIBUTES	ACTIVITIES	OUTCOMES	ATTRIBUTES	ACTIVITIES	OUTCOMES
INSTRUCTION	PLANNED						
	BUDGETED						
	EXECUTED						
ORGANIZED RESEARCH	PLANNED						
	BUDGETED						
	EXECUTED						
ETC.	PLANNED						
	BUDGETED						
	EXECUTED						

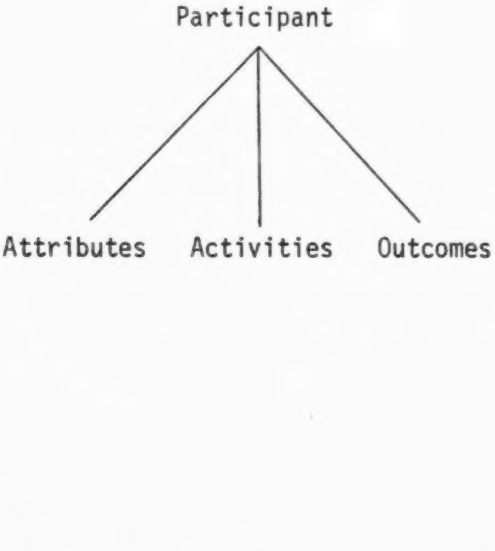
The basis for suggesting this concept lies in several relationships that can be identified between the various categories of information.

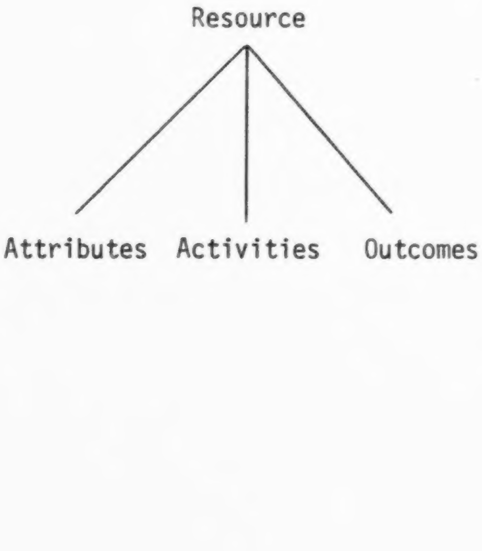
- Participants and resources bring with them certain attributes over a specified period of time, some of which are constant and some of which are variable. For example, student's age, sex, residency status, etc., can be considered constant for a specified academic term. Contrarily, variable attributes might be communication skills, knowledge of field, etc., over the same term. It is these variable attributes of participants that undergo change amidst the activities of the program element. The analogy applies also to any resource.

- Activities are associated with participants or with resources, e.g., in a research program, the number of hours spent in conducting research is an activity associated with and involving faculty, graduate students, the particular entity being researched, etc. Similarly, computer usage time is an activity associated with an equipment resource, a computer.

- Outcomes are changes in participants or in resources. As an example, changes in students are usually of the nature of human growth and intellectual development. Changes in resources are usually measured in terms of their appreciation or depreciation over time.

Thus, we can explicitly identify and associate attributes, activities, and outcomes to both a participant and a resource as shown below:


Participant
Attributes
Activities
Outcomes

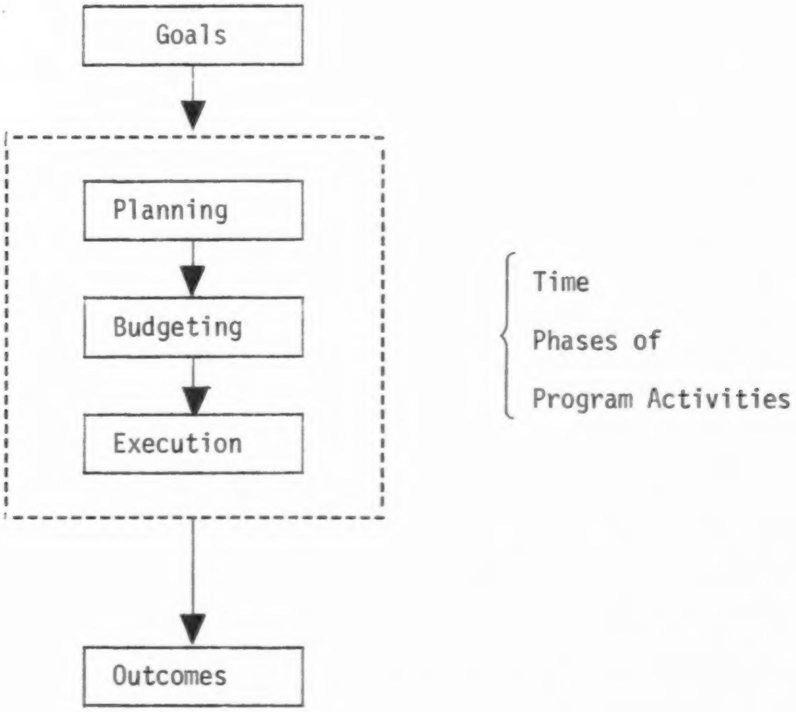

Resource
Attributes
Activities
Outcomes

Who might the participants be, and what categories might constitute resources?

Participants	Resources
Students	Faculty/Staff
Funders/Donors	Facilities (land, buildings)
Community Groups	Equipment
Places (e.g., ethnic community)	Supplies and Services
	Finances

Each of these in turn can be described in greater detail. For example, the subgroup "students" can be further subdivided in terms of lower division, upper division, or graduate, or by major field of study. A more detailed breakdown enables administrators to analyze participants and resources at the desired level of detail appropriate to their objectives.

Another dimension of this framework encompasses specified time frames within which activities and changes of participants and resources would occur. In the perceived path from goals to outcomes of a program activity, three time phases can be identified -- planning, budgeting, and execution.


Goals
Planning
Budgeting
Execution
Outcomes
Time
Phases of
Program Activities

The planning phase attempts to specify the *desired* quantity and levels of activity of participants and resources over a number of academic terms, including planning parameters for the upcoming term. The budgeting phase is a derivative of current planning and constitutes the *expected* levels of activity for the upcoming term and perhaps the subsequent one. The execution phase consists of the *actual* levels of activity of participants and resources and their resulting outcomes or changes.

By the nature of their utilization within specified time phases, quantitative distinctions can be made among planned, budgeted, and actual measures. For example, in the planning phase, a participant measure might reflect the desirability of having 50 percent of all students be lower division. However, it may be feasible, after assessing the planned situation, to budget for 55 percent. Finally, in actuality, the execution phase might reflect that 52 percent were lower division students. Moreover, there are other ways in which measures can be different. Table 4.1 indicates some of these ways and gives examples that might be emphasized in each time phase.

TABLE 4.1 WAYS IN WHICH MEASURES DIFFER

WAYS OF DIFFERING	PLANNED	BUDGETED	EXECUTED
Degree of articulation	3 FTE faculty	3 FTE professors	1 FTE Jill Jones 1 FTE Doug Hall 1 FTE Jim Dundy
	Physics 100	4 sections of Physics 100	85 students in Physics 100
Key participants involved	Planning commission	Legislature	Faculty/staff and students
Scope of objectives	Mission of institution	Financial/budgetary objectives	Number of participants and level of resources used

Although other ways might be identified, the few presented above provide important guidelines to describe various measures.

Perhaps the best way to relate the participants-resources concept is to illustrate some exemplary measures within the suggested framework. These are shown in Table 4.2.

To recapitulate, the participants-resources concept emphasizes analysis on the basis of who is involved in the activities and what resources are committed to augment the development of the participants. As a result, the outcomes can be associated with either a participant or a resource as direct measures of their changes. Finally, this concept allows measures to be differentiated among planning, budgeting, or execution time phases and enables measures to be used at the desired level of detail specified by the institutional planner or analyst.

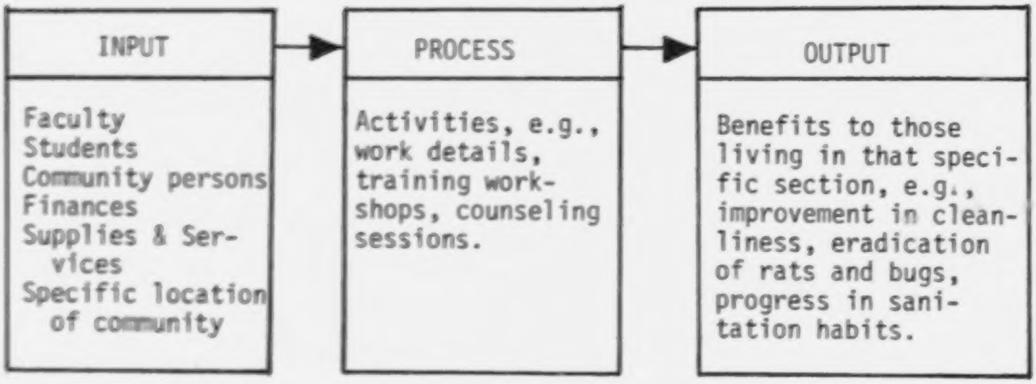
Input-Process-Output Concept

We can take the information categories of the previous concept and restructure them into an input-process-output configuration. In fact, this conceptual approach fits well with the current observations of higher education activities. For example, a public service activity directed toward the improvement of living conditions in a particular section of the community can be described as follows:

TABLE 4.2 EXEMPLARY MEASURES OF THE PARTICIPANTS - RESOURCES CONCEPT

PCS STRUCTURE	TIME PHASE	(STUDENT) PARTICIPANTS			(FACULTY) RESOURCES		
		Attributes	Activities	*Outcomes	Attributes	Activities	Outcomes
Instruction Program	Planned	Student levels: -lower div -upper div -graduate -special Residency status: -in state -out of state	Student level mix: -lower div 20% -upper div 40% -graduate 35% -special 5% Residency mix: -in state 60% -out of state 40% Weekly student hours Number of degree programs enrolled in, by degree level	Student status at end of term: -continuing 60% -transferring 5% -dropping out 15% -graduating 20% Student change in breadth of knowledge Total student credit hours completed Graduates receiving job offers	Faculty rank: -Professor -Associate Prof. -Assistant Prof. -TA	Faculty rank mix: -Professor 10% -Assoc. Prof. 10% -Asst. Prof. 40% -TA 40% Weekly faculty contact hours Faculty FTE distribution, by -teaching 50% -research 30% -public service 20%	Student evaluations of courses Number of articles published
	Budgeted		Student level mix: -lower div 20% -upper div 35% -graduate 40% -special 5% Residency mix: -in state 55% -out of state 45%			Faculty rank mix: -Professor 12% -Assoc. Prof. 10% -Asst. Prof. 50% -TA 28% Faculty FTE distribution for teaching = 60%	
	Executed	Same as planned phase	Student level mix: -lower div 19% -upper div 36% -graduate 42% -special 3% Residency mix: -in state 57% -out of state 43% Weekly student hours 60,000 Number of degree programs -Bachelor's 15 -Masters 10 -Doctorates 5	Student status at end of term: -continuing 63% -transferring 4% -dropping out 18% -graduating 15% Student change in breadth of knowledge is +12.3% as determined by comparing entering general knowledge aggregate scores to subsequent aggregate scores Total student credit hours completed: 54,000 Graduates receiving job offers: 55%	Same as planned phase	Faculty rank mix: -Professor 11% -Assoc. Prof. 11% -Asst. Prof. 48% -TA 30% Faculty FTE distribution for teaching = 57% Weekly faculty contact hours: 4,600	Student evaluations of courses: -Excellent 2% -Average 18% -Poor 20% Number of articles published: 1 for every 5 faculty members

*See Appendix D for comprehensive measures of student change outcomes


INPUT
Faculty
Students
Community persons
Finances
Supplies & Services
Specific location of community
PROCESS
Activities, e.g., work details, training workshops, counseling sessions.
OUTPUT
Benefits to those living in that specific section, e.g., improvement in cleanliness, eradication of rats and bugs, progress in sanitation habits.

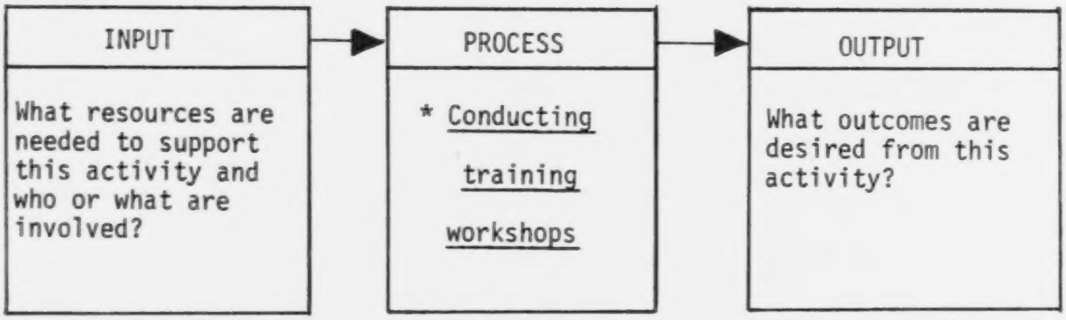
The public service activity harnesses resources (personnel, supplies and services, finances) to serve the participants (community persons, the locale in question) through various methods of activity (work details, training workshops) to induce outcomes that provide benefits (progress in sanitation habits, improvement in cleanliness of location). In general, measures of input consist of all the resources and participants involved in the activities; process describes the arrangements of participants and resources into activities that are necessary to bring about the desired outputs, which are the outcomes or changes in participants and resources.

This concept provides a different perspective for planning and analysis in several ways.

- Measures are structured according to a logical flow process that is easy to visualize and that describes higher education activities in a highly representative manner.

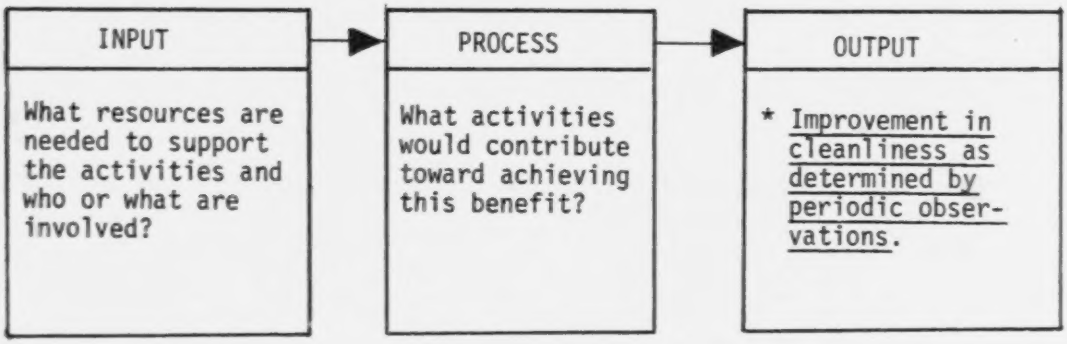
- Planners can stress various measures within the program element while still maintaining logical interrelationships with other measures. As examples, two options are illustrated.

Option 1: Stressing an activity. (*)



INPUT	PROCESS	OUTPUT
What resources are needed to support this activity and who or what are involved?	* Conducting training workshops	What outcomes are desired from this activity?

Option 2: Stressing an outcome. (*)



INPUT	PROCESS	OUTPUT
What resources are needed to support the activities and who or what are involved?	What activities would contribute toward achieving this benefit?	* Improvement in cleanliness as determined by periodic observations.

It remains the institution's prerogative to choose the desirable options from which to conduct analyses of program activities.

Similar to the participants-resources concept, the measures can be applied to the different time phases and be differentiated in various ways.

The structured information for this concept along with some examples is shown below:

PCS STRUCTURE	TIME PHASE	INPUT		PROCESS		OUTPUT	
		Participant Attributes	Resource Attributes	Participant Activities	Resource Activities	Participant Outcomes	Resource Outcomes
Instruction Program	Planned	1000 Lower Div. Stu.	50 FTE Faculty	15,000 WSH	600 FCH	12,000 SCH	$750,000
	Budgeted	900 Lower Div. Stu.	45 FTE Faculty	13,500 WSH	540 FCH	10,000 SCH	$675,000
	Executed	850 Lower Div. Stu.	43 FTE Faculty	12,750 WSH	516 FCH	9,400 SCH	$645,000
Etc.	Planned						
	Budgeted						
	Executed						

EY:
WSH = Weekly student hour
FCH = Faculty contact hour
SCH = Student credit hour

To recapitulate, the input-process-output concept provides an alternative arrangement of information categories that enables the emphasis to be placed on a logical flow process and allows analysts to concentrate on selected measures within the continuous process.

Summary

This document relates program measures to the Program Classification Structure and suggests various ways of structuring the information. This is not to imply that the PCS is the only structure. In reality, the analysis of higher education may desirably include analysis in terms of other structures. For example, an institution may desire to measure and analyze activities that are structured according to the different groups of people involved:

PARTICIPANT STRUCTURE	TIME PHASE	PROGRAM MEASURES			
Students	Planned				
Funders	Budgeted				
etc.	Executed				

Another alternative may be to structure them by degree program:

DEGREE PROGRAM STRUCTURE	TIME PHASE	PROGRAM MEASURES			
Degree Program A					
Degree Program B					
etc.					

In an overall approach to describing higher education, it seems quite plausible that the analysis of information initially requires the identification and determination of three essential components:

1. A structure as a framework that categorizes entities at various levels of detail for which descriptive information can be gathered. The term "entities" is used in a general sense to refer to either activities, outcomes, groups of people, or what-have-you.

2. Measures that can provide information about various aspects of an entity.

3. Conceptual structuring of measures to enhance analysis.

In conjunction with these, three other aspects must be seriously considered in the overall analysis process. One aspect concerns establishing reference points as standards against which various measures might be evaluated. These reference points may consist of historical data, norms, expected standards of performance, or standards from comparable, parallel activities. Another aspect is the development of procedures of analysis, including the generation of appropriate reports for appropriate decision makers. Finally, all of these components of structures, measures, reference points, and procedures must be applied within specified time phases, so that information can be relevant for the use of decision makers in planning and management.

The means and ends to which this document can be utilized lie in the hands of those who will mold its concepts to fit whatever purposes they have in mind. We have specifically attempted to provide the PCS with the program measures that would describe its program elements. As other methods of structuring information and other kinds of structures are identified by institutions, greater strides toward the improvement of planning and management in postsecondary education will be taken.

APPENDIX A

RESOURCE MEASURES

SUBGROUPS

SECTION 1

PERSONNEL:

OCCUPATIONAL ACTIVITY CATEGORIES

[Minter, 1972]

OCCUPATIONAL ACTIVITY CATEGORIES

CONCEPTS AND TERMINOLOGY

Abilities and skills required by assignments typically given to employees of higher education institutions can be classified into the seven broad categories of occupational activity displayed in Figure 2.1. These categories can be further divided to reflect broad levels of responsibility or qualifications typically associated with assignments in each occupational group.

FIGURE 2.1.

OCCUPATIONAL ACTIVITY CATEGORIES

1.0 EXECUTIVE ADMINISTRATIVE MANAGERIAL	2.0. INSTRUCTIONAL	3.0 PROFESSIONAL (RESEARCH, BUSINESS, HEALTH, et. al.)	4.0. TECHNICAL	5.0 OFFICE	6.0 CRAFTS AND TRADES	7.0 SERVICE

OCCUPATIONAL ACTIVITY SUBCATEGORIES

1.1. Administrative I	2.1. Instructional I	3.1. Professional I	4.1. Technical I	5.1. Office I	6.1. Crafts I	7.1. Service I
1.2. Administrative II	2.2. Instructional II	3.2. Professional II	4.2. Technical II	5.2. Office II	6.2. Crafts II	7.2. Service II
1.3. Administrative III	2.3. Instructional III	3.3. Professional III	4.3. Technical III	5.3. Office III	6.3. Crafts III	7.3. Service III
1.4. Administrative IV						

The seven occupational activity categories with subcategories appropriate to each are as follows:

(1.0) Executive-Administrative-Managerial

This occupational activity category includes assignments that require primary responsibility for management of the institution, or a customarily recognized department or subdivision thereof, and that require no more than 20 percent of the workweek be devoted to Fair Labor Standards Act (FLSA) nonexempt work. Assignments may require the performance of work directly related to management policies or general business operations of the institution or the performance of functions in the administration of a department or subdivision thereof directly related to academic instruction. It is assumed that assignments in this category customarily and regularly require the incumbent to exercise discretion and independent judgment, and to direct the work of others.

Subcategories of the Executive-Administrative-Managerial category.

(1.1) Assignment requires administrative support above the clerical level to a manager at a higher level, engages directly in specific administrative activities within a unit or subdivision, or has firstline supervisory responsibilities.

(1.2) Assignment requires the administration of an operational unit or program, or shares resonsibility for a major unit with an administrator at a higher level.

(1.3) Assignment requires the administration of a group of programs or a major operational unit, normally reporting to an officer holding a top executive appointment.

(1.4) Assignment requires reporting either to the top executive officer or to the governing board for the operation of a system, or institution, or for a primary phase of the institutional operation.

(2.0) Instructional

This category consists of assignments customarily made for the purpose of instruction. It excludes assignments associated with research projects.

Subcategories of the Instructional category.

(2.1) Assignment is generally carried on with guidance from others exercising primary responsibility. It is typically created for and staffed by people with student status at the employing institution and may be associated with such titles as teaching assistant and teaching associate.

(2.2) Assignment requires professional responsibility and experience of an entry or intermediate level. The assignment is typically associated with such titles as instructor or assistant professor.

(2.3) Assignment requires a full level of academic responsibility and experience in the professional field. The institution expects leadership in some aspect(s) of academic performance, such as curriculum development, excellence in teaching, contributions to academic field, etc. Assignment may be associated with such titles as associate professor, professor, and, occasionally, with the title of assistant professor.

(3.0) Professional (research, business, health, etc. not classified as Administrative or Instructional)

This category includes assignments requiring knowledge of an advanced type in a field of science or learning, or original and creative work in an artistic field, and no more than 20 percent of the workweek to be devoted to FLSA nonexempt work. Assignments of professional nature associated with organized research projects are included in this category.

Subcategories of the Professional category

(3.1) Assignment requires a bachelor's degree or equivalent.

(3.2) Assignment requires a master's degree or equivalent.

(3.3) Assignment requires a doctoral degree or equivalent.

(4.0) Technical

This category includes assignments requiring specialized knowledge or skills which may be acquired through experience or degree certificate programs below the bachelor's degree.

Subcategories of the Technical cateory.

Subcategories are indicated for institutional convenience only. Interinstitutional comparison and reporting of Technical subdivision categories does not seem warranted at this time because manpower markets and characteristics are predominantly localized. Standard definitions may be introduced as more is learned about this manpower category in higher education institutions.

(4.1) Entry assignments (institutionally defined).

(4.2) Intermediate assignments (institutionally defined).

(4.3) Advanced assignments (institutionally defined).

(5.0) Office

This category includes assignments typically associated with clerical activity.

Subcategories of the Office category.

Subcategories are indicated for institutional convenience only. Comparison or reporting of anything but aggregate data from this category does not seem warranted at this time because manpower markets and characteristics are predominantly localized. Standard definitions may be introduced as more is learned about this manpower cateory in higher education institutions.

(5.1) Entry assignments (institutionally defined).

(5.2) Intermediate assignments (institutionally defined).

(5.3) Advanced assignments (institutionally defined).

(6.0) Crafts and Trades

This category includes assignments to activities typically requiring knowledge or skill gained in recognized crafts or trades.

Subcategories of the Crafts and Trades category.

Subcategories are indicated for the convenience of the institution only. Comparison or reporting of anything but aggregate data from this category does not seem warranted at this time because manpower markets and characteristics are predominantly localized.

(6.1) Entry assignments (institutionally defined).

(6.2) Intermediate assignments (institutionally defined).

(6.3) Advanced assignments (institutionally defined).

(7.0) Service

This category includes assignment to activities requiring limited degree of previously acquired skills and knowledge.

Subcategories of Service category.

Subcategories are indicated for the convenience of the institution only. Comparison or reporting of anything but aggregate data from this category does not seem warranted at this time because manpower markets and characteristics are predominantly localized.

(7.1) Entry assignments (institutionally defined).

(7.2) Intermediate assignments (institutionally defined).

(7.3) Advanced assignments (institutionally defined).

SECTION 2

FACILITIES:
STANDARD ROOM USE CATEGORIES

[Romney, 1972]

Appendix 6.2

ROOM DATA DEFINITIONS AND CODES/ STANDARD ROOM USE CATEGORIES

Summary

ASSIGNABLE AREA

- 100 CLASSROOM FACILITIES
  - 110 Classroom
  - 115 Classroom Service
- 200 LABORATORY FACILITIES
  - 210 Class Laboratory
  - 215 Class Laboratory Service
  - 220 Special Class Laboratory
  - 225 Special Class Laboratory Service
  - 230 Individual Study Laboratory
  - 235 Individual Study Laboratory Service
  - 250 Non-Class Laboratory
  - 255 Non-Class Laboratory Service
- 300 OFFICE FACILITIES
  - 310 Office
  - 315 Office Service
  - 350 Conference Room (Office Related)
  - 355 Conference Room Service (Office Related)
- 400 STUDY FACILITIES
  - 410 Reading/Study Room
  - 420 Stack
  - 430 Open Stack Reading Room
  - 440 Processing Room
  - 455 Study Service

Room Data Definitions and Codes/
Standard Room Use Categories (Continued)

ASSIGNABLE AREA (Continued)

500 SPECIAL USE FACILITIES

- 510 Armory
- 515 Armory Service

- 520 Athletic/Physical Education
- 523 Athletic Facilities Spectator Seating
- 525 Athletic/Physical Education Service

- 530 Audio/Visual, Radio, TV
- 535 Audio/Visual, Radio, TV Service

- 540 Clinic (Non-Health Professions)
- 545 Clinic Service (Non-Health Professions)

- 550 Demonstration
- 555 Demonstration Service

- 560 Field Building

- 570 Animal Quarters
- 575 Animal Quarters Service

- 580 Greenhouse
- 585 Greenhouse Service

- 590 Other (All Purpose)

600 GENERAL USE FACILITIES

- 610 Assembly
- 615 Assembly Service

- 620 Exhibition
- 625 Exhibition Service

- 630 Food Facilities
- 635 Food Facilities Service

- 650 Lounge
- 655 Lounge Service

Room Data Definitions and Codes/
Standard Room Use Categories (Continued)

ASSIGNABLE AREA (Continued)

	660	Merchandising Facilities
	665	Merchandising Facilities Service
	670	Recreation
	675	Recreation Service
	680	Meeting Room (See also 350)
	685	Meeting Room Service
	690	Locker Room
700	SUPPORTING FACILITIES	
	710	Data Processing/Computer
	715	Data Processing/Computer Service
	720	Shop
	725	Shop Service
	730	Storage
	735	Storage Service
	740	Vehicle Storage Facility
	745	Vehicle Storage Facility Service
	750	Central Food Stores
	760	Central Laundry
800	HEALTH CARE FACILITIES	
	810	Patient Bedroom
	820	Patient Bath
	830	Nurse Station
	840	Surgery
	850	Treatment

Room Data Definitions and Codes/
Standard Room Use Categories (Continued)

ASSIGNABLE AREA (Continued)

	860	Service Laboratory
	870	Supplies
	880	Public Waiting
	895	Health Care Service
900	RESIDENTIAL FACILITIES*	
	910	Sleep/Study Without Toilet/Bath
	919	Toilet/Bath
	920	Sleep/Study with Toilet/Bath
	935	Sleep/Study Service
	950	House
	970	Apartment
	975	Apartment Service
000	UNCLASSIFIED FACILITIES	
	050	Inactive Area
	060	Alteration or Conversion Area
	070	Unfinished Area

Discussion

ASSIGNABLE AREAS

100 CLASSROOM FACILITIES

110 Classroom

Definition: A room used by classes that do not require special-purpose equipment for student use.

Description: Included in this category are rooms generally used for scheduled instruction requiring no special equipment and referred to as lecture rooms, lecture-demonstration rooms, seminar rooms, and general purpose classrooms. A classroom may be equipped with tablet arm chairs (fixed to the floor, joined together in groups, or flexible in arrangement), tables and chairs (as in a seminar room), or similar types of seating. A classroom may be furnished with special equipment appropriate to a specific area of study if this equipment does not render the room unsuitable for use by classes in other areas of study.

Limitations: This category does not include conference rooms (350), meeting rooms (680), auditoriums (610), or class laboratories (210). Conference rooms and meeting rooms are distinguished from seminar rooms on the basis of primary use; rooms with tables and chairs that are used primarily for meetings (as opposed to classes) are conference rooms or meeting rooms. (See categories 350 and 680 for the distinction between conference rooms and meeting rooms.) Auditoriums are distinguished from lecture rooms on the basis of primary use; a large room with seating oriented toward some focal point which is used for dramatic or musical productions, or for general meetings is an assembly facility (i.e., an auditorium normally used for purposes other than scheduled classes). A class laboratory is distinguished from a classroom on the basis of equipment in the room and by its limited use. A room with specialized equipment such as laboratory benches, typewriters, desk calculators, drafting tables, musical equipment (instructional), shop equipment, etc., that is used for instructional purposes is a class laboratory, a special class laboratory, or an individual study laboratory.

115 Classroom Service

Definition: A room that directly serves one or more classrooms as an extension of the activities in such a room.

Description: Included in this category are projection rooms, cloak rooms, preparation rooms, closets, and storage if they serve classrooms.

Limitations: This category does not include projection rooms, cloak rooms, preparation rooms, closets or storage if such rooms serve laboratories, conference rooms, meeting rooms, assembly facilities, etc. A projection booth in an auditorium (not used primarily for scheduled classes) is classified as assembly facility service.

200 LABORATORY FACILITIES

210 Class Laboratory

Definition: A room used primarily by regularly scheduled classes that require special-purpose equipment for student participation, experimentation, observation, or practice in a field of study.

Description: A class laboratory is designed for and/or furnished with equipment to serve the needs of a particular discipline for group instruction in regularly scheduled classes. The design of and/or equipment in such a room normally limits or precludes its use for other disciplines. Included in this category are rooms generally referred to as teaching laboratories, instructional shops, typing laboratories, drafting rooms, band rooms, choral rooms, (group) music practice rooms, language laboratories, (group) studios, and similar specially designed and/or equipped rooms if they are used primarily for group instruction in regularly scheduled classes. Computer processing rooms used primarily to instruct students in the use of EDP equipment are classified as class laboratories if that instruction is conducted primarily in regularly scheduled classes.

Limitations: This category does not include laboratory rooms that serve as individual (or independent) study rooms (230 or 410). It does not include laboratories used for group instruction that are informally or irregularly scheduled (220). This category does not include rooms generally referred to as research (non-class) laboratories (250). It does not include gymnasiums, pools, drill halls, laboratory schools, teaching clinics, demonstration houses, and similar facilities that are included under special use facilities (500). Computer processing facilities used jointly for instruction and/or research and/or administration are coded data processing/computer (710).

215 Class Laboratory Service

Definition: A room that directly serves one or more class laboratories as an extension of the activities in those rooms.

Description: Included in this category are balance rooms, cold rooms, stock rooms, dark rooms, equipment issue rooms, and similar facilities that serve a class laboratory, except animal rooms and greenhouses.

Limitations: This category does not include balance rooms, cold rooms, stock rooms, dark rooms, etc., that serve special class laboratories (225), individual study laboratories (235), or non-class laboratories (255). Rooms that provide housing for laboratory animals are classified as animal quarters (570). Greenhouses are separately categorized (580).

220 Special Class Laboratory

Definition: A room used primarily by informally (or irregularly) scheduled classes that require special-purpose equipment for student participation, experimentation, observation, or practice in a field of study.

Description: A special class laboratory is designed for and/or furnished with equipment to serve the needs of a particular area of study for group instruction in informally (or irregularly) scheduled classes. The design of and/or equipment in such a room normally limits or precludes its use for other areas of study. Special class laboratories typically (but not necessarily or exclusively) include such rooms as language laboratories, (group) music practice rooms, (group) studios, etc., if they are used primarily for group instruction in informally (or irregularly) scheduled classes. Note that the criteria for differentiating between special class laboratories and class laboratories is the irregular or informal nature of the scheduling, and not the specialization of the equipment or instruction.

Limitations: This category does not include class laboratories (210), individual study rooms (230 or 410), and research (non-class) laboratories (250). It does not include gymnasiums, pools, drill halls, laboratory schools, teaching clinics, demonstration houses, and similar facilities that are included under special use facilities (500). Computer processing facilities used jointly for instruction and/or research and/or administration are coded data processing/computer (710).

225 Special Class Laboratory Service

Definition: A room that directly serves one or more special class laboratories as an extension of the activities in those rooms.

Description: Included in this category are tape storage rooms, equipment storage rooms, stock rooms, and similar rooms which serve a special class laboratory, except animal rooms and greenhouses.

Limitations: This category does not include rooms that serve class laboratories (215), individual study laboratories (235), or non-class laboratories (255). Rooms that provide housing for laboratory animals are classified as animal quarters (570). Greenhouses are separately categorized (580).

230 Individual Study Laboratory

Definition: A room used primarily for individual student experimentation, observation, or practice in a particular field of study.

Description: Included in this category are music practice rooms, individual study laboratories, and similar rooms that serve a particular subject matter area. Stations may be grouped (as in an individual study laboratory) or individualized (as in a music practice room).

Limitations: This category does not include individual study facilities that are intended for general study purposes. Study areas not related to a specific area of study are classified as study facilities (400). Computer processing facilities used jointly for instruction and/or research and/or administration are coded data processing/computer (710).

235 Individual Study Laboratory Service

Definition: A room that directly serves one or more individual study laboratories as an extension of the activities in those rooms.

Description: Included in this category are equipment storage rooms, stock rooms, and similar rooms which serve an individual study laboratory facility, except animal rooms and greenhouses.

Limitations: This category does not include rooms that serve class laboratories (215), special class laboratories (225), or non-class laboratories (255). Rooms that provide housing for laboratory animals are classified as animal quarters (570). Greenhouses are separately categorized (580).

250 Non-Class Laboratory

Definition: A room used for laboratory applications, research, and/or training in research methodology that require special-purpose equipment for staff and/or student experimentation or observation.

Description: Included in this category are rooms generally referred to as research laboratories and research laboratory-offices.

Limitations: This category does not include rooms generally referred to as teaching laboratories, such as class laboratories (210), special class laboratories (220), or individual study laboratories (230).

255 Non-Class Laboratory Service

Definition: A room that directly serves one or more non-class laboratories as an extension of the activities in those rooms.

Description: Included in this category are balance rooms, cold rooms, stock rooms, dark rooms, etc., that serve a non-class laboratory, except animal rooms and greenhouses.

Limitations: This category does not include balance rooms, cold rooms, stock rooms, dark rooms, etc., that serve a class laboratory (215), a special class laboratory (225), or an individual study laboratory (235). Rooms that provide housing for laboratory animals are classified as animal quarters (570). Greenhouses are separately categorized (580).

300 OFFICE FACILITIES

310 Office

Definition: A room used by faculty, staff, or students working at a desk (or table).

Description: An office typically is equipped with one or more desks, chairs, tables, bookcases, and/or filing cabinets. Included in this category are rooms generally referred to as faculty offices, administrative offices, clerical offices, graduate assistant offices, teaching assistant offices, student offices, etc. Included in this category is a studio (music, art, etc.) if that room also serves as the office of a staff member.

Limitations: Special note should be taken of rooms which are equipped both as office and "research laboratory." A room equipped with laboratory benches, specialized scientific equipment, and/or such utilities as gas, water, steam, air, etc., is classified as a non-class laboratory (250). Note that this distinction rests on equipment rather than function. It is recommended that those rooms that have office-type equipment and fixed laboratory-type equipment (primarily in the biological and physical sciences) within the same room be classified as non-class laboratories (250). Large rooms, such as glass shops, printing shops, reading rooms, research laboratories, etc., that incidentally contain a desk space for a technician or staff member are classified according to the primary purpose of the room, rather than as offices.

315 Office Service

Definition: A room that directly serves an office or group of offices as an extension of the activities in those rooms.

Description: Included in this category are file rooms, mimeograph rooms, vaults, waiting rooms, interview rooms, closets, private toilets, records rooms, and office supply rooms.

Limitations: Centralized mimeograph and printing shops that are campus-wide in scope should be classified as shop facilities (720).

350 Conference Room (Office Related)

Definition: A room serving an office complex and used primarily for staff meetings and departmental activities other than instructional activities.

Description: A conference room may be equipped with tables and chairs, lounge-type furniture, straight-back chairs, and/or tablet arm chairs. Normally it is used by a specific organizational unit, whereas meeting rooms (680) are used for general purposes such as community group meetings. It is distinguished from facilities such as seminar rooms, lecture rooms, and general classrooms (110) because it is used primarily for activities other than scheduled classes. Rooms that serve both as conference rooms and meeting rooms should be classified according to their principal use.

Limitations: This category does not include classrooms (110), seminar rooms (110), lecture rooms (110), auditoriums (610), interview rooms (315), or lounge facilities (650).

355 Conference Room Service (Office Related)

Definition: A room that directly serves one or more conference rooms as an extension of the activities in those rooms.

Description: Included in this category are such rooms as kitchenettes, chair storage rooms, projection rooms, sound equipment rooms, etc.

Limitations: This category does not include kitchens, dining rooms, and similar facilities in a centralized conference-type building (685). Dining rooms open to the student body at large and/or the public are categorized as food facilities (630).

400 STUDY FACILITIES

Note: Offices that serve library activities are coded 310.

410 Reading/Study Room

Definition: A room used by individuals to study books or audio/visual materials.

Description: Included in this category are rooms generally referred to as library reading rooms, carrels, study rooms, individual study stations, study booths, and similar rooms that are intended for general study purposes. Study stations may be grouped (as in a library reading room) or individualized (as in a carrel). Study stations in a reading room may include typewriters, remote terminals of a computer, electronic display equipment, etc. (See also 430.) Reading rooms need not be located only in libraries but also may be found in residence halls or academic buildings.

Limitations: This category does not include individual study laboratories (230) that are limited in use to a particular area of study. This category does not include classrooms (110), class laboratories (210), special class laboratories (220), nonclass laboratories (250), offices (310), sleep/study rooms in residence halls or other housing units (910 or 920), waiting rooms (315), or lounge facilities (650).

420 Stack

Definition: A room (or portion of a room) used to provide shelving for library or audio/visual materials.

Description: Included in this category are rooms generally referred to as library stacks. (See also 430.)

Limitations: This category does not include bookshelf space in classrooms, laboratories, or offices. Audio/visual film and tape libraries that generally serve groups (rather than individuals) are classified as audio/visual, radio, TV facilities (530).

Separate tape storage rooms for language laboratories should be classified as special class laboratory service (225) or individual study laboratory service (235). Separate rooms containing musical scores, records, and tapes are classified as stack space if the primary purpose of the materials is for instruction or research (as in a library or music building). Rooms containing such materials and intended for listening enjoyment (as in a student union) should be classified as recreation facility service (675).

430 Open Stack Reading Room

Definition: A room that is a combination of a reading room and stack, generally without physical boundaries between the stack and reading areas.

Description: Included in this category are rooms generally referred to as open stack reading rooms.

Limitations: This category is not used if the area of an open stack reading room can be prorated to reading room (410) and stack (420) at the time the physical inventory is made. This category might be used as a "working-purposes" category if proration on some appropriate basis is anticipated. Further limitations are defined under reading room (410) and stack (420).

440 Processing Room

Definition: A room which serves a reading/study room, stack, or open stack reading room as a supporting service to such rooms.

Description: Included in this category are areas generally used to house card catalogs, circulation desks, bookbinding, microfilm processing, and audio/visual record-playback equipment for distribution to individual study stations.

Limitations: This category does not include such library space as offices for staff (310); acquisitions work areas that are to be classified as offices (310); campuswide or centralized audio/visual preparation areas, bookbinding, and microfilm processing areas that are to be classified as shop facilities (720); instructional facilities for library science staff that are to be classified as classrooms (110), class laboratories (210), special class laboratories (220), offices (310), or other appropriate designations.

455 Study Service

Definition: A room which directly serves reading/study rooms, stacks, open stack reading rooms, or processing rooms as a direct extension of the activities in those rooms.

Description: Other categories in these definitions have provided a "service" category for each type of room. Because such facilities are minimal in library-type spaces this one category of study facility service space is provided for all types of study facilities. Included are such areas as closets, locker space, coatrooms, etc.

Limitations: This category does not include card catalogs, circulation desks, and other areas designated as processing rooms (440).

500 SPECIAL USE FACILITIES

510 Armory

Definition: A room or area used by Reserve Officer Training Corps (ROTC) units.

Description: This category includes indoor drill areas, indoor rifle ranges, and special-purpose military science rooms.

Limitations: Classrooms (110), class laboratories (210), and offices (310) in an armory facility are designated as such, even though they are located in an armory building.

515 Armory Service

Definition: A room that directly serves an armory facility as an extension of the activities of that facility.

Description: This category includes supply rooms, weapons rooms, coatrooms, etc.

Limitations: Classroom service rooms (115), class laboratory service rooms (215), and office service rooms (315) are so classified even though they are located in an armory building.

520 Athletic/Physical Education

Definition: A room (or area) used by students, staff, or the public for athletic/physical education activities.

Description: Included in this category are rooms generally referred to as gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, swimming pools, ice rinks, indoor tracks, indoor "fields," and fieldhouses.

Limitations: No distinction by room use category is made on the basis of instructional versus intramural or intercollegiate use of gymnasiums, swimming pools, etc. The program dimension of this classification structure provides the capability of making those distinctions.

Institutions that wish to study the utilization of such facilities will need to further subdivide this category. This category does not include classroom facilities (100), laboratory facilities (200), or office facilities (300), even though they may be located in an athletic building. This category does not include the spectator seating area associated with athletic facilities (523). It does not include outside fields, tennis courts, archery ranges, etc. This category does not include rooms used for recreational purposes (670) such as bowling alleys, billiards rooms, ping pong rooms, ballrooms, chess rooms, card playing rooms, or hobby rooms.

523 Athletic Facilities Spectator Seating

Definition: The seating area used by students, staff, or the public to watch athletic events.

Description: Included in this category are permanent seating areas in fieldhouses, gymnasiums, and natatoria.

Limitations: This category does not include temporary or moveable seating areas. Stadium seating by definition is structural area.

525 Athletic/Physical Education Service

Definition: A room that directly serves an athletic/physical education facility as an extension of the activities in that facility.

Description: Included in this category are rooms generally referred to as physical education locker rooms, shower rooms, coaches' rooms, ticket booths, dressing rooms, equipment supply rooms, first aid rooms, skate sharpening rooms, towel rooms, etc.

Limitations: This category does not include public toilet rooms.

530 Audio/Visual, Radio, TV

Definition: A room or group of rooms used for the production and distribution of audio/visual, radio, and TV materials, and for the operation of equipment for the communication of these materials.

Description: This category includes rooms generally referred to as TV studios, radio studios, sound studios, graphics studios, and similar rooms.

Limitations: Studios used primarily as part of an instructional program to train students in communication techniques should be classified as class laboratories (210) if scheduled, or as special class laboratories (220) if not scheduled.

535 Audio/Visual, Radio, TV Service

Definition: A room that directly serves an audio/visual, radio, or TV facility as an extension of the activities in that facility.

Description: Included in this category are rooms generally referred to as film library, tape library, control room, videotape recorder room, property storage, recording rooms, engineering maintenance rooms, darkrooms, preparation rooms, and equipment storage rooms.

Limitations: Control rooms, recording rooms, and similar facilities used primarily to train students in communication techniques should be classified as class laboratory service (215) or special class laboratory service (225).

540 Clinic (Non-Health Professions)

Definition: A room used for the diagnosis and/or the treatment of patients in a program other than medicine (human or veterinary), dentistry, and student health care.

Description: Included in this category are rooms generally referred to as patient examination rooms, testing rooms, consultation rooms. Clinics are typically associated with such educational areas as psychology, speech and hearing, remedial reading, and remedial writing.

Limitations: This category does not include clinics associated with student health care. It does not include clinics for the medical or dental treatment of humans or animals.

545 Clinic Service (Non-Health Professions)

Definition: A room that directly services a clinic facility as an extension of the activities in that facility.

Description: Included in this category are waiting rooms, observation rooms, control rooms, records rooms, and similar supporting rooms.

Limitations: This category does not include rooms which serve health care facilities (800).

550 Demonstration

Definition: A room (or group of rooms) used to practice the principles of certain disciplines such as teaching and home economics.

Description: This category includes demonstration schools, laboratory schools, pre-school nurseries, etc., if the facilities support the training of the college-level students as teachers. This category includes home management houses that serve to train college-level students in home economics.

Limitations: Demonstration schools, laboratory schools, preschool nurseries, and home management houses in which the students serve as the subjects for a research study are classified as non-class laboratories (250). Rooms that serve nursery, elementary, or secondary schools students (in a laboratory school or pre-school nursery) will not be classified as classrooms, class laboratories, or offices, etc., but rather as demonstration facilities. However, classrooms (110) or class laboratories (210) in such facilities used primarily for college-level students should be so classified. Offices (310), conference rooms (350), and meeting rooms (680) used by college-level staff should be so classified.

555 Demonstration Service

Definition: A room that directly serves a demonstration facility as an extension of the activities in that facility.

Description: Included in this category are facilities generally referred to as storerooms, laundry, etc., in a home demonstration facility, and as kitchen, lockers, shower rooms, etc., in a laboratory school.

Limitations: The distinction between a demonstration facility and demonstration facility service is somewhat arbitrary. In general, the primary activity areas such as kitchen, dining room, living room (in a home demonstration house), or classrooms, laboratories, gymnasiums that serve nursery, elementary, or secondary school students (in a laboratory school) should be designated as demonstration facilities.

560 Field Building

Definition: A barn or similar structure for animal shelter or the handling, storage, and/or protection of farm products, supplies, and tools, and for field experiments.

Description: Field-service facilities include barns, animal shelters, sheds, silos, feed units, hay storage, and seedhouses. Greenhouses related to farm operations are included in this category. Structures are typically of light frame construction with unfinished interiors, usually but not exclusively related to argicultural field operations, and are frequently located outside the central campus area. Also included are such facilities as meteorological field test stations.

Limitations: Location of a building is not sufficient justification for classification as a field-service facility. Finished rooms such as endocrine research laboratories, dairy research laboratories, etc., should be classified as non-class laboratory facilities (250).

570 Animal Quarters

Definition: A room that houses laboratory animals maintained for the institution for research and/or instruction purposes.

Description: This category includes rooms generally referred to as animal rooms, cage rooms, stalls, wards, and similar rooms that are used to house animals intended for use in class laboratories, non-class laboratories, special class laboratories, or individual study laboratories.

Limitations: Does not include areas for treatment of patient animals. See health care facilities (800).

575 Animal Quarters Service

Definition: A room that directly serves an animal care facility as an extension of the activities in that facility.

Description: The category includes rooms generally referred to as feed storage rooms, feed mixing rooms, cage washing rooms, and similar facilities such as surgery, casting, or instrument rooms.

Limitations: Does not include areas that directly serve areas used for the treatment of patient animals. See health care facilities (800).

580 Greenhouse

Definition: A building or room, usually composed chiefly of glass or other light transmitting material, for the cultivation and/or protection of plants.

Description: Includes rooms generally referred to as greenhouses.

Limitations: Does not include greenhouses related to farm operations. (See 560.)

585 Greenhouse Service

Definition: A room that directly serves a greenhouse facility as an extension of the activities in that facility.

Description: Includes rooms generally referred to as headhouses.

Limitations: Does not include greenhouses related to farm operations. (See 560.)

590 Other

Definition: A category of last resort.

Description: This category is included only as a category of last resort to be used to account for and classify those facilities that cannot be described, even approximately, with other codes and definitions.

Limitations: This category should have very limited use if it is used at all.

600 GENERAL USE FACILITIES

610 Assembly

Definition: A room designed and equipped for the assembly of large numbers of persons for such events as dramatic, musical, devotional, livestock judging, or commencement activities.

Description: This category includes rooms generally referred to as theaters, auditoriums, concert halls, arenas, chapels, and livestock judging pavilions. Seating area, stage, orchestra pit, chancel, arena, and aisles are included in assembly facilities. Assembly facilities may also serve instructional purposes to a minor or incidental extent.

Limitations: Assembly facilities that are used primarily for instructional purposes are classified as classrooms (110).

615 Assembly Service

Definition: A room that directly serves an assembly facility as an extension of the activities in that facility.

Description: This category includes check rooms, coat rooms, ticket booths, dressing rooms, projection booths, property storage, make-up rooms, costume storage, green rooms, control rooms, etc.

Limitations: Lobbies are nonassignable space classified as circulation area (WWW).

620 Exhibition

Definition: A room used for exhibition of materials, works of art, artifacts, etc., and intended for general use by students and the public.

Description: This category includes museums, art galleries, and similar exhibition areas.

Limitations: Collections not primarily for general exhibition, such as departmental displays of anthropological, botanical, or geological specimens, should be classified under an appropriate laboratory category.

625 Exhibition Service

Definition: A room that directly serves an exhibition facility as an extension of the activities in that facility.

Description: This category includes work rooms for the preparation of materials and displays, vaults or other storage for works of art, check rooms, etc.

Limitations: Research areas in museums are classified as non-class laboratories (250) or non-class laboratory service (255).

630 Food Facilities

Definition: A room used for eating food.

Description: This category includes dining halls, cafeterias, snack bars, restaurants, and similar eating areas, including such areas in residence halls, faculty clubs, etc. This category includes facilities which are open to the student body and/or the public at large. Areas intended primarily as food facilities, even though containing vending machines rather than serving counters, are included in this category. Rooms with vending machines other than for regular meal or snack service are classified as lounge facilities (650) or merchandising facilities (660).

635 Food Facilities Service

Definition: A room that directly serves a food facility as an extension of the activities in that facility.

Description: This category includes such areas as kitchens, refrigeration rooms, freezers, dishwashing rooms, cafeteria serving, preparation, cleaning, etc., including such areas in residence halls.

650 Lounge

Definition: A room used for rest and relaxation.

Description: A lounge facility is typically equipped with upholstered furniture, draperies, and/or carpeting, and may include vending machines.

Limitations: A lounge facility is distinguished from a conference room (350) and a meeting room (680) by its more informal atmosphere and its general public availability. A lounge area associated with a toilet is nonassignable space and classified as mechanical area. A room devoted wholly to vending machines is classified as a merchandising facility (660). Vending machine areas in food facilities are classified 630.

655 Lounge Service

Definition: A room that directly serves a lounge facility, such as a kitchenette.

660 Merchandising Facilities

Definition: A room (or group of rooms) used to sell products or services.

Description: This category includes such rooms as bookstores, barber shops, post offices, dairy stores, student union "desks," and vending machine areas devoted wholly to vending machines.

Limitations: This category does not include dining rooms, restaurants, snack bars, and similar food facilities (630), or vending machine areas associated with food facilities or lounges (650). It does not include meeting rooms (680) which are classified as conference facilities. Hotel and motel rooms are classified in the appropriate category of residential facilities (900).

665 Merchandising Facilities Service

Definition: A room that directly serves a merchandising facility as an extension of the activities in that facility.

Description: Included in this category are rooms generally referred to as supply closets, sorting rooms, freezers, telephone rooms, and private toilets.

670 Recreation

Definition: A room used by students, staff, and/or the public for recreational purposes.

Description: This category includes such rooms as bowling alleys, pool and billiards rooms, ping pong rooms, ballrooms, chess rooms, card-playing rooms, (noninstructional) music listening rooms, and hobby rooms.

Limitations: This category does not include gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, swimming pools, ice rinks, indoor tracks, indoor fields, or fieldhouses that should be classified as athletic/physical education facilities (520). It does not include outdoor facilities such as tennis courts, archery ranges, fields (football, hockey, etc.), or golf courses.

675 Recreation Service

Definition: A room that directly serves a recreation facility as an extension of the activities in that facility.

Description: This category includes storage closets, equipment issue rooms, cashiers' desks, and similar rooms.

Limitations: This category does not include kitchens, short-order kitchens, snack bars, or other food facilities. It does not include athletic/physical education facility service (525) such as locker rooms, shower rooms, ticket booths, dressing rooms, and other similar service areas.

680 Meeting Room

Definition: A room used for a variety of non-class meetings.

Description: A meeting room may be equipped with tables and chairs, lounge-type furniture, straight-back chairs, and/or tablet arm chairs. Although it may be assigned to a specific organizational unit, it is used primarily by groups for general purposes such as student senate, student government, community groups, and short term meetings conducted by an extension division. A meeting room is distinguished from a conference room (350) because conference rooms are considered part of an office complex and are generally used for staff meetings or other departmental non-class activities.

Limitations: Rooms serving an office complex and used primarily for staff meetings are classified as conference rooms (350). Seminar rooms used primarily for scheduled classes are classified as classrooms (110).

685 Meeting Room Service

Definition: A room that serves a meeting room as an extension of the activities in that room.

Description: Included in this category are such rooms as kitchenettes, chair storage rooms, projection rooms, sound equipment rooms, etc.

Limitations: This category does not include such rooms as kitchenettes and chair storage rooms that serve conference rooms (355).

690 Locker Room

Definition: A room used for changing clothes and/or storing personal materials.

Description: Includes service rooms intended for student and/or staff use principally for storage of clothing and/or individual materials, e.g., physical plant locker rooms.

Limitations: Does not include physical education or intercollegiate athletics locker rooms and areas. (See 525).

700 SUPPORTING FACILITIES

710 Data Processing/Computer

Definition: A room or group of rooms used for processing of data by computers.

Description: This category includes keypunch rooms, electronic data processing rooms, electronic computer rooms, and similar data processing areas.

Limitations: This category does not include rooms containing desk calculators, post-billing machines, check-writing machines, and similar office or office service rooms. It is recommended that the area occupied by a keypunch machine, sorter, or other Electronic Data Processing (EDP) equipment in a room otherwise classifiable as an office (310) not be prorated to this category. A data processing facility used only for instruction should be classified as a class laboratory (210), special class laboratory (220), or individual study laboratory (230).

If a room, otherwise classifiable as an office (310), happens to contain a keypunch machine, sorter, or other small EDP equipment, do not prorate the area in that room, but rather classify the entire room as office (310).

715 Data Processing/Computer Service

Definition: A room that directly serves a data processing computer facility as an extension of the activities in that facility.

Description: This category includes such rooms as card storage, paper form storage, tape storage, control rooms, plugboard storage, wiring rooms, equipment repair rooms, observation rooms, and similar service areas.

Limitations: This category does not include rooms for data processing personnel. These rooms should be classified as offices (310).

720 Shop

Definition: A room used for the manufacture, repair, or maintenance of products or equipment.

Description: This category includes such rooms as carpenter shops, plumbing shops, electrical shops, painting shops, and similar physical plant maintenance facilities. It also includes central printing and duplicating shops and campuswide or centralized audio/visual preparation areas.

Limitations: This category does not include instructional shops; industrial arts and vocational-technical shops used for instruction should be classified as class laboratories (210). Materials preparation areas in audio/visual, radio stations, and TV studios should be so classified (535). Maintenance and repair areas of vehicles, airplanes, boats, etc., should be so classified (745). Engineering drafting rooms serving the physical plant operation are classified as offices (310). Blueprint storage rooms are classified as office service (315).

725 Shop Service

Definition: A room that directly serves a shop facility as an extension of the activities in that facility.

Description: Included in this category are tool supply-storage rooms, materials storage rooms, and similar equipment or material supply and/or storage rooms. Locker rooms, shower rooms, lunch rooms, and similar non-public areas that serve the shop facility should be included.

Limitations: This category does not include service areas related to class laboratories (215) or non-class laboratories (255). It does not include vehicular repair facilities (garages) that are classified as vehicle storage facility service (745). Blueprint storage rooms should be classified as office service (315).

730 Storage

Definition: A room used to store materials.

Description and Limitations: Classification of a room as a storage facility is limited by definition to a central storage facility (warehouse) and inactive departmental storage. Storage related to other types of space follow the classification of that type of space with a "service" designation. For example, a storage closet for office supplies is classified as office service (315). The distinction between the "service" and "storage" classifications rests on the possibility of physical separation of the materials stored. If the materials being stored could be placed in a warehouse, implying only occasional demand for the materials, then storage facility is the appropriate classification. Storage that must be close at hand because of the nature of the materials stored and the demands placed upon them by the program should be classified in the appropriate "service" category.

735 Storage Service

Definition: A room that directly serves a storage facility.

740 Vehicle Storage Facility

Definition: A room or structure that is used to house and/or store vehicles.

Description: This category includes parking structures and other rooms and buildings generally referred to as garages, boat houses, airport hangars, and other storage areas for vehicles (broadly defined).

Limitations: This category does not include portions of barns or similar field building facilities that are used to house farm implements. Uncovered exterior parking areas are excluded.

745 Vehicle Storage Facility Service

Definition: A room or structure used to service vehicles.

Description: This category includes any area associated with a vehicle storage facility that is used for the maintenance and repair of automotive equipment, boats, airplanes, and similar vehicles.

Limitations: This category does not include service areas that serve building maintenance and repair, and that are classified as shop facilities (720).

750 Central Food Stores

Definition: A central facility for the processing and storage of foods used in food facilities.

Description: This category includes food storage areas, lockers, cold rooms, refrigerators, meat processing areas, and similar facilities located in a central food stores building.

Limitations: Offices (310) located in a central food stores building are so classified. Food storage areas, freezers, lockers, etc., not located in a central food stores building are classified as food facility service (635).

760 Central Laundry

Definition: A central facility used for cleaning, washing, drying, and ironing linens, uniforms, etc.

Description: This category includes laundry rooms, drying rooms, ironing rooms, etc., located in a central laundry.

Limitations: Offices (310) located in a central laundry are so classified. Laundry rooms, drying rooms, ironing rooms, etc., not located in a central laundry are classified as residential facilities or as service space to whatever type of facility they serve.

800 HEALTH CARE FACILITIES

Note: This category includes the room uses listed below that are located in student health facilities and in health professions clinics and in hospitals. The codes and definitions in this series (800) are designed to describe health care facilities for humans as well as animals requiring health care. This category does not include non-medical clinic facilities. Note also that offices that serve in health care activities are classified as offices (310).

810 Patient Bedroom

Definition: A room equipped with a bed and used for patient care.

Description: This category includes general nursing care, acute care, semiconvalescent/rehabilitative adult or pediactric bedrooms, intensive care units, progressive coronary care units, emergency bed care units, observation units, infant care nurseries, incubator units, wards, etc. Connected clothes closets are included. Stalls for animal patients are also included.

820 Patient Bath

Definition: A room containing patient bath and toilet facilities.

Description: Included in this category are toilet/bath facilities adjoining or in conjunction with patient bedrooms.

Limitations: Public toilet facilities are excluded.

830 Nurse Station

Definition: A room or area used by nurses who are supervising and/or administering health care facilities.

Description: Included in this category are areas devoted to records charting, reception desks, admissions desks, and areas adjoining nurses stations, such as utility rooms, work-storage areas, formula preparation areas, medications areas, etc.

Limitations: Rooms that can be identified as offices should be classified 310.

840 Surgery

Definition: A room used for surgery.

Description: Included in this category are major and minor surgery rooms, delivery rooms, special procedures operating rooms, and rooms used in conjunction with and as a direct extension of the activities of a surgery room such as labor rooms, recovery rooms, monitoring/observation rooms, special support equipment rooms (e.g., anesthesia, heart, lung, x-ray, etc.), dictation booths, scrub-up areas, instrument clean-up and storage, gurney storage, sterile supplies storage.

850 Treatment

Definition: A room used for diagnostic and therapeutic treatment.

Description: Included are rooms used for radiology, fluoroscopy, angiography, physical therapy, dialysis, cardiac catherization, pulmonary function/vascular testing, EEG, ECG, EMG, combined doctor's office and examination/treatment rooms, and rooms which support treatment rooms as a direct extension of the activities of such a facility such as dressing rooms, film processing and viewing rooms, work preparation rooms, special equipment storage.

860 Service Laboratory

Definition: A room used to provide diagnostic support services to health care facilities.

Description: Includes rooms generally referred to as pathology labs, pharmacy labs, autopsy labs, etc., such as hematology, chemistry tissue, bacteriology, serology, blood bank, basal metabolism, isotope, and rooms which serve service laboratories as a direct extension of the activities of such a facility, such as rooms generally referred to as cadaver storage/morgue, autoclave and centrifuge rooms, warm and cold rooms.

Limitations: This category does not include class laboratories (210), special class laboratories (220), or other facilities used primarily for organized instruction.

870 Supplies

Definition: A room used to store supplies for health care facilities.

Description: Central supply, pharmacy supplies/storage and dispensary, miscellaneous storage of a relatively inactive nature, other than that included in other primary and service room types.

880 Public Waiting

Definition: A room used by the public to await admission, treatment, or information.

Description: Included are lobbies, waiting and reception areas, visiting areas, and viewing areas.

Limitations: Lounges (650) are excluded from this category.

895 Health Care Service

Definition: Rooms used for housekeeping, linen storage, and handling. Includes rooms used by housekeeping staff for storerooms, closets, locker rooms, etc., for building maintenance and operation.

Limitations: Nonassignable areas are explicitly excluded from this category. Excludes mechanical and equipment areas.

900 RESIDENTIAL FACILITIES

Note: Offices that serve residential activities are coded 310. Likewise, food facilities that serve student and faculty housing activities are coded 630 and 635.

910 Sleep/Study Without Toilet/Bath

Definition: One or more residential rooms for one or more individual(s) typically furnished with bed(s), wardrobe(s), desk(s), and chair(s), without an internally connected bath.

Description: This category includes single or multiple sleep/study rooms. A sleep/study facility may be a room for combined sleep/study, a room exclusively for sleeping, or a room for living/study, and includes connected closets.

Limitations: Study rooms for general use, available and open to the dormitory residents at large, and not part of bedroom or sleeping room suites, should be classified as reading/study (410). Residential quarters equipped with cooking facilities are coded as apartment (950). Separate food preparation rooms serving sleep/study areas, including small kitchens used by the occupants, are coded as food service (635).

919 Toilet/Bath

Definition: A toilet and/or bathroom intended to be used only by the occupants of the residential facilities, rather than by the general public.

Description: This category includes common or shared bathroom facilities which may consist of full or half-baths, showers, or toilet and shower combinations, used by the residents, and accessible from a corridor or other general circulation area.

Limitations: This category does not include public rest rooms. Bathrooms internal to a sleep/study room (920), apartment (950), or house (970) are included in those respective categories.

920 Sleep/Study with Toilet/Bath

Definition: One or more rooms for individual(s), typically furnished with bed(s), wardrobe(s), desk(s), and chair(s), with an internally connected bath.

Description: This category includes single or multiple sleep/study rooms with bath facilities internal to the suite and not separately coded 919. A sleep/study facility may be a room for combined sleep/study, a room exclusively for sleeping, or a room for living/study, and includes connected closets.

Limitations: Study rooms for general use, available and open to the dormitory residents at large, and not part of bedroom or sleeping room suites, should be classified as reading/study (410). Residential quarters equipped with cooking facilities are coded as apartment (950). Separate food preparation rooms serving sleep/study areas, including small kitchens used by the occupants, are coded as food facilities service (435).

935 Sleep/Study Service

Definition: A room (or group of rooms) which directly serve the occupants of an individual sleep/study room with or without toilet/bath (910 and 920).

Description: This category includes mail rooms, laundry and pressing rooms, linen closets, maid rooms, serving rooms, trunk storage rooms, and telephone rooms which serve the occupants of sleep/study facilities.

Limitations: This category does not include food facilities (see 630 and 635), central laundry (see 760), or central food stores (see 750), toilet/bath (see 919), lounge facilities (see 650), recreation or activity areas (see 670, 675), or nonassignable building service areas.

950 Apartment

Definition: A complete living unit that is not a separate structure.

Description: This is the basic module or group of rooms designed as a complete housekeeping unit, i.e., contains bedroom(s), living room(s), kitchen, and toilet facilities. It is not intended that individual rooms be specifically identified within the apartment, but only that the total interior space be accounted for. This category includes apartments provided for faculty, staff, or students. Apartments need not be located in a residential building.

955 Apartment Service

Definition: A room or area that directly serves an apartment or group of apartments as an extension of the activities in that facility.

Description: This category includes laundry rooms, mail rooms, linen closets, maid rooms, trunk storage rooms, and telephone rooms which serve apartment facilities.

970 House

Definition: A complete living unit that is a separate structure.

Description: This is the basic module or group of rooms designed as a complete housekeeping unit, i.e., contains bedroom(s), living room(s), kitchen, and toilet facilities. It is not intended that individual rooms be specifically identified within the structure, but only that the total interior area be accounted for. This category includes houses provided for faculty, staff, or students.

000 UNCLASSIFIED FACILITIES

050 Inactive Area

Definition: Rooms that are available for assignment to an organizational unit or activity but are unassigned at the time of the inventory.

Limitations: Rooms that are being modified or are not completed at the time of the inventory are so classified (060 or 070).

060 Alteration or Conversion Area

Definition: Rooms that are temporarily out of use because they are being altered, remodeled, or rehabilitated at the time of the inventory.

Limitations: Rooms that are inactive or are not completed at the time of the inventory are classified 050 or 070, respectively.

070 Unfinished Area

Definition: All potentially assignable areas in new buildings or additions to existing buildings that are not completely finished at the time of the inventory.

Limitations: This category is intended only for the unfinished part of a building or addition. The parts that are in use should be classified elsewhere.

NONASSIGNABLE AREA

Note: The following categories are included for purposes of completing the list of room use categories, but are not recommended for collection purposes. Institutions collecting nonassignable area data may find them useful for plant management purposes.

WWW	CIRCULATION AREA
XXX	CUSTODIAL AREA
YYY	MECHANICAL AREA
ZZZ	STRUCTURAL AREA

SECTION 3

EQUIPMENT CATEGORIES

[State University System of Florida, 1972]

EQUIPMENT CATEGORIES

LABORATORY, SCIENTIFIC, AND INSTRUCTIONAL EQUIPMENT

Amplifiers and megaphones
Cameras and accessories
Photographic developing equipment
Film, splicers, rewinders, previewers
Headsets, speakers
Television transmitters, monitors, receivers
Radio transmitters, receivers
Recorders (tape and video), phonographs
Projectors, screens
Optical equipment, telescopes, and accessories
Binoculars and accessories
Microscopes and accessories
Balances, all types
Pumps, all types
Oscilloscopes, oscillographs, oscillators
Autoclaves, warmers, incubators, sterilizers
Blenders, water bath, centrifuge, stirring apparatus
Measuring and control devices, meters
Power supply, transformers, generators
All models for instructional use
Classroom furniture
Other laboratory, scientific, and instructional equipment

MOTOR VEHICLES - PASSENGER

Passenger vehicles not included below
Sedan
Station wagons, carryalls, jeeps
Bus
Trucks, pick-up type and panel
Trucks, dump, stake, and van
Boats

MOTOR VEHICLES - OTHER

Motor vehicles other than passenger not listed below
Tractors, farm type
Trailers, all types
Forklifts, and other material-handling types
Motor scooters, trucksters
Outboard motors
Ground maintenance equipment, mowers, spreaders, cranes

OFFICE EQUIPMENT AND FURNITURE

Adding machines
Calculators
Dictaphones and transcribers
Intercom systems
Typewriters, manual
Typewriters, electric
Bookcases, shelving, racks
Cabinets, file, all types and sizes
Chairs, stools, all types
Conference tables
Credenzas
Desks, all except classroom type
Machine stands
Beds, mattresses
Cabinets, bedside stands, tables
Dormitory chairs
Clothes dryers
Ranges, gas or electric
Sofas, all types
Washing machines
Card sorter
Collator, all types
Interpreters
Keypunch machines
Memory drum
Verifier
Flexoriter
Duplicating equipment not listed below
Stitching and binding machines
Ditto and mimeo-type duplicating machines, wet process
Copy machines, all, dry process
Presses, offset
Other office equipment and furniture

EQUIPMENT NOT OTHERWISE CLASSIFIED

Cooling equipment
Surveying and drafting equipment
Food service equipment
Works of art
Hand tools, electric and air
Firearms
Shop machinery and equipment
Musical instruments and related accessories
Janitorial and maintenance equipment
Athletic equipment
Other miscellaneous equipment not classified elsewhere

SECTION 4

SUPPLIES AND SERVICES CATEGORIES

[Office of the Comptroller of Florida, 1971]

SUPPLIES AND SERVICES CATEGORIES

SERVICES

Advertising

Includes direct advertising and publicity in newspapers, radio, video, magazines, periodicals, outdoor advertising, pictures, mats, and related items.

Communication and Transportation

Includes postage, telephone, telegraph expenses, post office box rental, messenger service, freight, express, drayage, and parcel post.

Printing and Reproduction Services

Includes printing and reproduction services with related composition and binding operations for books, bulletins, leaflets, pamphlets; ditto and mimeographing; photostating; blueprinting; and photography; also includes computer services.

Repairs and Maintenance

Includes work accomplished for repairs and alterations to buildings, equipment, roads, walks, and like items.

Care and Subsistence

Includes subsistence allowance, hospital charges, room and board, doctors' examination fees, training and equipment, laundry services, ambulance service.

Travel

Includes transportation of persons for mileage, per diem, authorized allowances, and other expenses incident to travel which are authorized.

Utilities

Includes charges for heating fuel, water, gas, and electricity.

Other Contractual Services

Includes all services not otherwise classified, such as consulting services, legal advertising, storage (not in connection with travel), credit services, laundry and towel services.

MATERIALS AND SUPPLIES

Bedding and Other Textile Products

Includes all items of clothing, together with materials and sewing supplies.

Building and Construction Supplies

Includes materials and supplies entering into the construction or repair of buildings, roads, or bridges, such as lumber, cement, brick, asphalt, nails, roofing.

Purchases for Resale

Includes purchases to be resold, as in operation of bookstores, soda fountains, cafeterias, dining halls.

Instructional and Research Supplies

Includes classroom and laboratory supplies for instructional purposes, research supplies, and examination supplies.

Medical Supplies

Includes medical and hospital supplies and related items.

Agricultural Supplies

Includes agricultural supplies such as maps, charts, seed, fertilizers, forage, and stable supplies.

Food Products

Includes food, food products, beverages, etc., for human consumption. Note: Does not include purchase of food for resale listed under Purchases for Resale.

Maintenance and Heating Supplies

Includes janitorial and household supplies, minor tools, parts, and fittings. Also includes fuels used in cooking, heating, and generating power.

Motor Fuels and Lubricants

Includes gasoline, diesel oil, motor oil, greases, clutch and brake fluids, and like items.

Office Materials and Supplies

Includes stationery, envelopes, paper, pencils, notebooks, calendar pads, standard forms, file folders and guides, ink, and other small items normally used in offices. Also, small equipment items of less than the minimum standard set by the institution, such as desk pen sets, ash trays, small staplers.

Other Materials and Supplies

Includes materials and supplies not otherwise classified.

CURRENT CHARGES AND OBLIGATIONS

Insurance and Surety Bonds

Includes all forms of insurance and bonds.

Rental of Facilities

Includes rental of buildings, offices, conference rooms, residences, land.

Rental of Equipment

Includes data processing equipment, postage meter machines, typewriters, machinery.

Other Current Charges and Obligations

Includes current charges and obligations not otherwise classified such as dues, commissions, registrations, rewards, payments made for information and evidence, magazine and like subscriptions.

APPENDIX B

FINANCIAL MEASURES SUBGROUPS:

SOURCE OF FUNDS

CATEGORIES

SECTION 1

COLLEGE AND UNIVERSITY BUSINESS ADMINISTRATION (CUBA)

SOURCE OF FUNDS

CATEGORIES

[ACE, 1968]

CUBA SOURCE OF FUNDS CATEGORIES

Educational and General. Includes revenues from unrestricted current funds, revenues from restricted funds to the extent they have been expended during the period covered by the financial report, and, where appropriate, revenues from unrestricted gifts and bequests to the extent applied by the governing board during the period. The sources in this category are

Student Tuition and Fees. Includes all tuition and fees assessed against students, net after refunds. Does not include charges for room, board, and other services properly categorized under Auxiliary Enterprises. Tuition and fee remissions should be assessed and reported in this category.

Governmental Appropriations. Includes all amounts received from or made available by governmental sources out of federal, state, and local governmental revenues. Funds from governmental agencies for sponsored research or other sponsored programs should not appear here, but should be reported under their specific subheadings.

Endowment Income. Includes income from the investments of unrestricted and restricted endowment, term endowment, and quasi-endowment funds.

Private Gifts. Includes gifts and bequests received by the institution from such sources as foundations, alumni, business corporations, religious orders, and private citizens.

Sponsored Research. Includes revenues from governmental agencies or other outside organizations or individuals for specific research projects for which payments will be made in accordance with contracts, grants, or other written agreements.

Other Separately Budgeted Research. Includes revenues from all separately organized research divisions that are not financed in the manner described for sponsored research activities. Examples are research bureaus and institutes, and agriculture and engineering experiment stations.

Other Sponsored Programs. Includes revenues from all separately budgeted programs (other than research) that are supported by sponsors outside the institution. Examples are training programs, training and instructional institutes, and similar activities, for which payments will be made in accordance with contracts, grants or other written agreements.

Recovery of Indirect Costs, Sponsored Programs. Includes recovery of indirect costs accruing from sponsored research and other sponsored programs.

Sales and Services of Educational Departments. Includes the incidental income of educational departments resulting from services performed, sales of publications, and similar activities. If the departmental activities producing the revenues are conducted primarily for professional training of students, they should be classified as Organized Activities Related to Educational Departments.

Organized Activities Related to Educational Departments. Includes revenues produced by entities which exist to provide an instructional or laboratory experience for students and which incidentally create goods or services that may be sold. In the course of providing the incidental goods or services, expenditures are incurred in addition to those necessary solely for the educational benefit of the students. Examples of organized activities are demonstration schools, college theaters, hotels operated in connection with instruction of students in the institutional administration curriculum, and stores that sell the products of experimental farms.

Other Sources. All items of revenues not covered in the above categories should be included under this title.

Student Aid. Includes revenues equal to the total amount of restricted funds expended during the fiscal period for scholarships, fellowships, grants-in-aid, and prizes and awards. Amounts should be identified according to the following sources: gifts, endowment income, governmental appropriations, and other sources.

Auxiliary Enterprises. Includes revenues generated by enterprises that are not directly related to the educational activities of the institution, but that exist for the purpose of serving the student body and faculty. Examples are intercollegiate athletics, residence halls, faculty housing, student unions, and student stores.

SECTION 2

HIGHER EDUCATION FINANCE MANUAL PROJECT

SOURCE OF FUNDS

CATEGORIES

HEFM SOURCE OF FUNDS

The "Source of Funds" categories being proposed by the Higher Education Finance Manual (HEFM) project have been developed to represent potential sources of all institutional funds. They are intended to reflect only the source of the funds. Additional descriptive subheadings can be used to reflect restrictions on uses. Therefore, one portion of the traditional source-of-funds category "Student Aid" might be displayed by HEFM in the following way:

Source:	Grants and Contracts, Government, Federal
Restriction:	Restricted
Use:	Student Financial Aid

The HEFM source of funds categories are defined in the following way:

Source:	Tuition and Fees
Description:	Includes all tuition and fees assessed (net of refunds) against students. Charges for room, board, and other services rendered by auxiliary enterprises should be classified under revenues of auxiliary enterprises.

Those tuitions and fees which the state collects and returns to the institution in the form of state appropriations should also be included in this total.

Source: Government Appropriations

Description: Includes all governmental appropriations, including funds disbursed for the account of the institution by the governmental agency, such as payments into a state retirement system on behalf of the institution.

Those tuition and fees collected by the institution and returned in the form of state appropriations would have to be subtracted from this total, as they already appear as "Tuition and Fees."

Governmental appropriations are broken down by level of government--federal, state or local. The determination of which level is considered the "funder" should be based on who actually disbursed the monies to the institution, regardless of the initial source of the monies.

Source: Government Grants and Contracts

Description: Includes all funds earned as a result of a government grant or contract.

This source is also broken down by level of government.

The criteria for determining government funding source for "Government Appropriations" will be applied here.

Source: Private Grants and Gifts

Description: Includes all funds derived from private sources. All income from revocable trusts or distributable by direction of the trustees of such trusts should be reported under this category. Income from irrevocable trusts should be considered as "Investment Income." All indirect-cost reimbursements associated with a private grant or contract should also be reported in this category, although they would be considered as unrestricted funds.

Source: Investment Income

Description: Includes the following income: (1) all income from the investment of the endowment fund (includes dividends, interest, and rent or other income on the principal of the endowment fund), (2) all income from funds held in trust by others under irrevocable trusts, (3) income from various investment "pools," and (4) the return on short-term investments of current funds.

For those institutions employing the "Total Return" concept of endowment fund management, that portion of the capital gains of the endowment fund appropriated for use by the institution should be reported as a transfer to the current fund from the endowment fund and would, therefore, not be included in this category.

This category is also further broken down into (1) Endowment Income and (2) Other Investment Income. Endowment Income would include that income described in the first category above and Other Income would include both of the other two categories described.

Source: Auxiliary Enterprises

Description: Includes all monies earned during the reporting period as a result of auxiliary activities. Auxiliary enterprises are defined as those activities conducted primarily to provide facilities or services for students, faculty, and staff. Such activities include residence halls, food services, intercollegiate athletics (unless operated as an integral part of the department of physical education, in which case the receipts are classified under Sales of Educational Departments), college unions, college stores, etc.

Interdepartmental transactions of service departments and storerooms which provide services to the institution, as contrasted with services to students, faculty, and staff, should not be included in this category. Normally such transactions do not result in receipts to the institution because they are essentially interdepartmental transfers of costs.

Source: Sales and Services of Educational Departments

Description: Includes all funds earned from the operation of educational departments which are not directly associated with the training of students. Examples of such monies are fees derived from film rentals, scientific and literary publications, and testing services. If service to the public is the primary purpose of an operation rather the training of students (for example, in the case of hospitals operated by universities), the receipts generated by the operation would be included in this category.

Source: Organized Activities Related to Educational Departments

Description: Includes all funds derived from operations carried on primarily for the training of students. If service to students, rather than instruction, is the primary purpose of the operation, the revenues should be reported as "Auxiliary Enterprise" revenues.

Source: Proceeds on Sales of Capital Assets

Description: Includes all monies derived from the sale of institutional capital assets. This would represent the "total proceeds" on sales, since it is assumed that without depreciation the total cost of the assets was written off in the year of purchase. This category would not include the proceeds from the sale of stocks or bonds, for example, from the endowment fund. Proceeds such as these would be included as "Other" revenue.

Source: Other Sources

Description: Includes all funds earned during the reporting period which are not reported in any of the previously described categories.

APPENDIX C

BENEFICIARY GROUP MEASURES, TARGET GROUP MEASURES, ACTIVITY MEASURES, AND OUTCOME MEASURES

This section consists of program measures for the beneficiary group, target group, activity and outcome measures groups for each PCS subprogram. To guide the reader in associating these four groups of program measures with the appropriate level of the PCS, the following coding scheme is used to indicate the *lowest* level in the structure at which any particular measure can be introduced.

P = Program
SP = Subprogram
C = Program category
SC = Program subcategory
S = Program sector
E = Program element

Also, in describing the measures, words such as "Total," "Number of," and "During period" were deleted except in cases where the measure might be misunderstood. For example, "Students enrolled" should be read as "Total number of students enrolled (or expected to be enrolled) during period."

The lists of these measures for the PCS subprograms follow.

1.0 INSTRUCTION PROGRAM

1.1 GENERAL ACADEMIC INSTRUCTION

Beneficiary Group Measures:

- -Students enrolled, by educational objective, such as academic occupational, vocational (SP)
- -Students enrolled, by geographic distribution (SP)
- -Students enrolled, by socioeconomic mix (SP)
- -Students enrolled, by sex (SP)
- -Students enrolled, by major/nonmajor status (E)
- -Students enrolled, by student level, such as graduate, lower division, upper division (E)

Target Group Measures:

- -Intended student population, by educational objective, such as academic, occupational, vocational (SP)
- -Intended student population, by geographic distribution (SP)
- -Intended student population, by socioeconomic mix (SP)
- -Intended student population, by sex (SP)
- -Intended student population, by level of academic ability (E)
- -Intended enrollment mix, by major/nonmajor status (E)
- -Intended student population, by student level, such as graduate, lower division, upper division, high school students taking college preparatory courses (E)

Activity Measures:

- -Degree programs, by level of degree program (SC)
- -Courses offered, by course level (SC)
- -Course enrollments, by level of student (E)
- -Weekly faculty contact hours, by instruction type, such as lecture, seminar, laboratory (E)
- -Weekly student hours, by instruction type (E)
- -Sections offered, by instruction type and course level (E)

Outcome Measures:

- -Degree or certificates granted, by type (SC)
- -Students accepted for transfer to another institution (SC)
- -Percent of graduates receiving job offers within a certain time period, such as 90 days after graduation (SC)
- -Average first salary of graduates (SC)
- -Student credit hours not completed, by course level (E)
- -Students passing the course as a percent of those originally enrolled (E)

1.0 INSTRUCTION PROGRAM (Continued)

1.2 OCCUPATIONAL AND VOCATIONAL INSTRUCTION

Beneficiary Group Measures:

- Beneficiary group measures listed under subprogram 1.1

Target Group Measures:

- Target group measures listed under subprogram 1.1

Activity Measures:

- Activity measures listed under subprogram 1.1

Outcome Measures:

- Outcome measures listed under subprogram 1.1

1.0 INSTRUCTION PROGRAM (Continued)

1.3 SPECIAL SESSION INSTRUCTION

Beneficiary Group Measures:

-Beneficiary group measures listed under subprogram 1.1

-Students enrolled who desire to further their education through academic periods not in common with the institution's regular term (SP)

Target Group Measures:

-Target group measures listed under subprogram 1.1

-Intended student population desiring to further their education through academic periods not in common with the institution's regular term (SP)

Activity Measures:

-Activity measures listed under subprogram 1.1

-Courses offered only during special sessions, by course level (SC)

Outcome Measures:

-Outcome measures listed under subprogram 1.1

1.0 INSTRUCTION PROGRAM (Continued)

1.4 EXTENSION INSTRUCTION (FOR CREDIT)

Beneficiary Group Measures:

- -Beneficiary group measures listed under subprogram 1.1
- -Students enrolled who desire to further their education via a mode of instruction that is normally offered through an extension division or similar agency for continuing studies (SP)
- -Students enrolled who are living in geographical areas outside the normal service area of the institution, e.g., extension courses conducted on military bases (SP)

Target Group Measures:

- -Target group measures listed under subprogram 1.1
- -Intended student population desiring to further their education via a mode of instruction that is normally offered through an extension division or similar agency for continuing studies (SP)
- -Intended student population desiring to further their education who are living in geographical areas outside the normal service area of the institution (SP)

Activity Measures:

- -Activity measures listed under subprogram 1.1

Outcome Measures:

- -Outcome measures listed under subprogram 1.1

2.0 ORGANIZED RESEARCH PROGRAM

2.1 INSTITUTES AND RESEARCH CENTERS

Beneficiary Group Measures:

- -Faculty who conducted research within a problem area specified by the mission and scope of the research center (SC)
- -Faculty appointed for the academic term and visiting scholars who conducted research during the summer session (SC)
- -Graduate students who were included in research with faculty as research assistants (SC)
- -Source groups funding research projects (E)
- -Organizations applying the resultant knowledge (E)

Target Group Measures:

- -Faculty interested in doing research within a problem area specified by the mission and scope of the center (SP)
- -Faculty interested in submitting research proposals that include dissertation-stage graduate students as research assistants (C)
- -Faculty appointed for the academic term and visiting scholars interested in conducting research during the summer session (SC)

Activity Measures:

- -Proposals submitted, by funding source (SC)
- -Projects initiated, by funding source (SC)
- -Projects in progress, by funding source (SC)

-Projects completed, by funding source (SC)

-Number and size of budgets administered, by funding source (SC)

-Students participating in research activities, by level of student (E)

-Seminars held (if dissemination of knowledge is a function of the institute or center) (E)

-People participating in seminars (E)

Outcome Measures:

-Journal publications, by type of journal (E)

-Books, monographs, or pamphlets published, by publishing firm (E)

-U.S. patents awarded (E)

-U.S. copyrights registered

-Awards and citations received for scholarly and artistic work and technological developments and applications (E)

2.0 ORGANIZED RESEARCH PROGRAM (Continued)

2.2 INDIVIDUAL AND PROJECT RESEARCH

Beneficiary Group Measures:

- -Faculty who conducted research of merit as determined by peer group (SP)
- -Faculty successful in attracting additional funds for research from outside sources (C)
- -Dissertation-stage graduate students who conducted on-campus thesis research (SC)
- -Organizations and people utilizing or applying the resultant knowledge

Target Group Measures:

- -Faculty interested in submitting research proposals of merit as determined by the judgment of peers (SP)
- -Faculty interested in submitting research proposals that require "seed money" to attract additional funds from outside sources (C)
- -Dissertation-stage graduate students who presently do not have financial aid and wish to do on-campus thesis research (SC)

Activity Measures:

- -Activity measures listed under subprogram 2.1

Outcome Measures:

- -Outcome measures listed under subprogram 2.1

3.0 PUBLIC SERVICE PROGRAM

3.1 COMMUNITY EDUCATION

Beneficiary Group Measures:

-Community groups that participated in noncredit instruction services of the institution, by type of group, such as socioeconomic groups, common-interest group (SP)

-Community people who participated in noncredit instructional courses offered in conjunction with a disciplinary degree-credit program (C)

Target Group Measures:

-Intended community population other than matriculated students desiring noncredit instruction services that are not offered by other institutions serving the community, by type of target group, such as socioeconomic group, common-interest group (SP)

-Intended community population wishing to participate in noncredit instructional courses offered in conjunction with a disciplinary degree-credit program (C)

-An established proportion of the community that will enable the institution to offer noncredit courses on a self-supporting basis (SC)

Activity Measures:

- -Courses offered, by target group (SC)
- -Course enrollment, by target group (E)
- -Weekly faculty contact hours, by instruction type (E)
- -Weekly student hours, by instruction type (E)
- -Course hours offered (E)

Outcome Measures:

- -Students completing course as a percent of those originally enrolled (E)
- -Certifications or licenses granted, such as real estate licenses (E)

3.0 PUBLIC SERVICE PROGRAM (Continued)

3.2 COMMUNITY SERVICE

Beneficiary Group Measures:

- Community groups that participated in community service activities provided by an institution, by type of group, such as socioeconomic group, common-interest group (SP)
- Community people who received advisory services related to their vocation (SP)

Target Group Measures:

- Members of the community who require advisory services related to their vocation that the state, federal, or other funding agency feels should be provided on a continuous basis (SP)
- Common-interest groups and community sectors that are so geographically dispersed that community services are best offered through centralized seminars and conferences (C)
- An established percentage of new entrants and/or continuing members of a specific community sector required to maintain or improve a given level of proficiency (SC)

Activity Measures:

- Service programs offered, by target group (SC)
- The number and hours of contribution of students participating in service program, by type of service program (E)
- The number and hours of contribution of faculty voluntarily participating in service program, by type of service program (E)

Outcome Measures:

-People or groups reached or served, by type of service program or target group (E)

3.0 PUBLIC SERVICE PROGRAM (Continued)

3.3 COOPERATIVE EXTENSION SERVICE

Beneficiary Group Measures:

- -Common-interest groups that have been served by cooperative extension activities by geographic area (SP)
- -Specific communities that have experienced improvement in the general environment and living conditions within their area (SC)

Target Group Measures:

- -Common-interest groups, e.g., those working in agriculture and related industries intended to be served by cooperative extension efforts between the institution and outside agencies, by geographic area (SP)
- -General environment of specific community (SP)
- -Living accommodations in specific areas (SC)
- -Specific agricultural products (E)

Activity Measures:

- -Conferences held, by type of extension service program (SC)
- -Programs offered, by type of extension service program (SC)
- -People attending conferences, by target group (E)
- -Visits to homes, by target group (E)
- -Individual contacts, by target group (E)

Outcome Measures:

- -Decrease in unemployment rate, by target group (E)
- -Increase in income level, by target group (E)
- -Decrease in mortality rate, by target group (E)
- -Decrease in crime rate, by target group (E)

4.0 ACADEMIC SUPPORT PROGRAM

4.1 LIBRARIES

Beneficiary Group Measures

- -Students, faculty, and staff that utilized the library for study, research, or leisure (SP)
- -Academic departments that upgraded to or maintained a satisfactory collection of books and periodicals (SC)

Target Group Measures:

- -General environment of the library (SP)
- -Students, faculty, and staff of the institution intending to utilize the library for study, research, or leisure (SP)
- -Students and faculty interested in a similar field of knowledge, e.g., education (C)
- -Students and faculty interested in studying within a particular discipline, e.g., elementary education (SC)
- -Books required by specific disciplines to upgrade or maintain the status of the collection (SC)

Activity Measures:

- -Volumes acquired, by type, such as book, journal, microfilm (C)
- -Volumes catalogued and inventoried, by type (C)
- -Volumes bound, by type (C)
- -Volumes circulated, by target group (C)
- -Weekly hours services available, by type of service (C)

-Requests for reference and information services, by type of service (C)

-Head count of people passing through library doors (C)

Outcome Measures:

-People served, by type of service and target group (C)

-Average lag time between service request and service response (C)

-Utilization rate of seating capacity (C)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.2 MUSEUMS AND GALLERIES

Beneficiary Group Measures:

- -Persons actually involved in museum and gallery activities (exhibitors, attendees, donors, students, or renters or purchasers of art objects or instructional materials) (SP)
- -Museum or gallery societies (SP)
- -Ethnic or racial groups (better understood or appreciated through presentation of their cultures in exhibits) (E)

Target Group Measures:

- -Members of the general community interested in the activities of the museum and/or gallery (SP)
- -Students, faculty, and staff of the institution, as potential users of the museum and/or gallery for study, research, or leisure (SP)
- -Prospective donors and exhibitors in particular disciplines with interests or talents compatible with museum and/or gallery activities (C)
- -Common interest groups and specific age groups with special interests in museum and/or gallery services, e.g., high school history class, persons interested in Eskimo artifacts, persons wishing to learn pottery making (E)
- -Art objects or artifacts of a particular type or style available for purchase, loan, or restoration by the museum and/or gallery for its collection (E)

Activity Measures:

- -Acquisitions, by type, such as paintings, photographs, sculpture, artifacts (C)
- -Restoration, by type (C)
- -Art objects and artifacts catalogued and inventoried, by type (C)
- -Loans, sales, or rentals, by type (C)
- -Weekly hours museums or gallaries are open (C)
- -Research projects served (C)
- -People served, by type of service and target group (C)
- -Special exhibits presented, by type (C)
- -Head count of people passing through museum or gallary doors (C)

Outcome Measures:

- -People served, by type of service and target group (C)
- -Exhibit awards won (C)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.3 AUDIO-VISUAL SERVICES

Beneficiary Group Measures:

- Students, faculty, and staff who were actually involved in audio-visual services (SP)
- Producers of audio-visual materials (SP)
- Common-interest groups or members of an organizational unit, such as the school of architecture, who were actually provided audio-visual services in their field of interest or study (C)

Target Group Measures:

- Students, faculty, and staff of the institution desiring support from audio-visual services that are not part of primary program elements, for a wide range of purposes, such as instruction, supplementary education, information dissemination, entertainment (SP)
- Audio-visual materials and equipment that are required to provide satisfactory service to members of the institution (SC)
- Students and faculty of an organization unit, such as a department, requiring audio-visual services support (C)
- Students and faculty within a particular discipline interested in utilizing audio-visual services in support of their instructional programs, such as automotive technologies, social work and helping services, or agriculture technologies (SC)

Activity Measures:

- -Audio-visual materials and equipment acquired, by type, such as films, slides, projectors (C)
- -Audio-visual materials produced, by type (C)
- -Audio-visual materials and equipment catalogued and inventoried, by type (C)
- -Requests for audio-visual materials and equipment, by type (C)
- -Requests for audio-visual staff participation in special presentations (C)

Outcome Measures:

- -People served, by type of service and target group (C)
- -Average lag time between service request and service response (C)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.4 COMPUTING SUPPORT

Beneficiary Group Measures:

- Students and faculty who actually utilized computer support in conducting primary program activities (SP)
- Commercial, government, or other agencies that were provided services through the institution's computer center (SP)
- Administrative departments within the institution that utilized computer support services (C)

Target Group Measures:

- Students, faculty, and staff of the institution requiring computer assistance in conducting primary program activities (SP)
- Commercial, government, or other agencies desiring computer programming assistance on projects requiring computer resources available through the institution's computer center, such as a county highway department (SP)
- Computer activities, such as software development, systems analysis, systems maintenance (SP)
- Students and faculty interested in a similar field of knowledge requiring computing support, such as computer and information sciences or engineering (C)
- Students and faculty within a particular discipline requiring computing support, such as systems analysis, electrical engineering, or nuclear physics (SC)

Activity Measures:

- -Computer processing time, in weekly hours, by target group (C)
- -Weekly hours computer center is open (C)
- -Computer schedules maintenance time, in weekly hours; preventive maintenance (C)
- -Systems utilization time, in percent; time devoted to systems and software development and testing as percent of time available (C)
- -Commerical job requests by type of project and by target group, such as state highway department, local publishing agency (C)
- -Project development time, in man-months, by type of project or target group (C)
- -Number of requests for assistance in user systems design and development and programming assistance (C)
- -Cards keypunched (C)
- -Jobs processed (throughput rate), by target group (C)
- -Characters or lines read, printed, or transferred to mass storage (C)

Outcome Measures:

- -Average turnaround time per job processed (C)
- -Machine utilization time, in percent; the time machine is utilized as a percent of time available for use (C)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.5 ANCILLARY SUPPORT

Note: Each institution will have to determine its own ancillary support program elements within this support subprogram. Consequently, the specific measures relating to target group measures, beneficiary group measures, activity measures, and outcome measures will also have to be defined by the institution. As examples, two of the more common types of ancillary support programs are presented below.

Teaching Hospitals

Beneficiary Group Measures:

- -Medical profession, locally and in general (C)
- -Students and faculty of the institution who utilize the hospital as a teaching/learning resource (C)
- -Patients receiving hospital services in various medical specialties (E)

Target Group Measures:

- -Community health professionals whose talents could be utilized or whose effectiveness could be enhanced by association with the activities of the teaching hospital (C)
- -Students pursuing the health professions, such as medical students, interns, residents, and student nurses, who desire or are required to participate in teaching hospital activities (C)
- -Members of the community requiring health care in various medical specialties (E)

-Sources of disease or illness at which instruction, treatment, and research are directed, such as broken bones, bacteria, viruses, psychoses (E)

Activity Measures:

-Inpatient admissions, by medical specialty, such as surgery, pediatrics, obstetrics (E)

-Outpatient visits, by medical specialty (E)

-Emergency visits, by medical specialty (E)

-Operations, by surgical specialty (E)

-Discharges (E)

-Births (E)

-Nursing hours per day, by medical specialty (E)

-Referrals made for further treatment, by medical specialty (E)

-Patient-day statistics, such as total beds occupied daily, average patient stay (E)

-Ancillary services rendered, by type, such as meals served, lab tests performed, x-rays taken, prescriptions filled (E)

-Students participating in hospital activities, by medical specialty and level of medical student, such as intern, resident, undergraduate medical student (E)

-Research projects initiated, by medical specialty (E)

-Research projects in progress, by medical specialty (E)

-Research projects completed, by medical specialty (E)

Outcome Measures:

-Average patient stay, in days, by medical specialty (E)

- -Average number of beds filled as a percent of the total number of beds available, by medical specialty (E)
- -Medical cases healed as a percent of medical cases handled, by specific treatment or diagnosis (E)
- -Medical cases not healed that result in the patient's discharge, transfer to another medical facility, or death, by specific treatment or diagnosis (E)
- -Special demonstration programs conducted by medical specialty, such as an open heart surgery demonstration (E)
- -Medical breakthroughs achieved, by medical specialty (E)
- -Individuals completing residency requirements, by medical specialty (E)
- -Publications, by type of publication, such as journals, books, monographs, pamphlets; and by publishing firm and medical specialty (E)
- -U.S. patents awarded and copyrights registered, by medical specialty (E)
- -Awards and citations received for scholarly work and technological developments and applications, by medical specialty (E)

Demonstration School

Beneficiary Group Measures:

- -Education profession, locally and in general (C)
- -Children enrolled in the demonstration school by grade level, such as nursery school, kindergarten, primary grades, secondary grades (C)

-Professional educators directing the activities of the school (SC)

-Students pursuing education as a career who actually observe or practice teaching in the demonstration school (SC)

Target Group Measures:

-Parents of demonstration-school-age children who desire a unique educational experience for those children (SP)

-Students pursuing education as a career, such as education students and practice teachers, who desire or are required to participate in demonstration school activities (C)

-Professional educators with innovative, improved teaching methods for implementation in the school (C)

-Courses of study which lend themselves to new approaches in techniques of learning (C)

Activity Measures:

-Enrollment in demonstration school, by grade level, such as a nursery school, kindergarten, primary grades, secondary grades (E)

-Education students enrolled in a teaching training program (E)

-Weekly hours demonstration school is in session, by grade level (E)

-Experimental projects initiated (E)

-Experimental projects in progress (E)

-Experimental projects completed (E)

Outcome Measures:

- -Students completing demonstration class, by grade level (E)
- -Students not completing demonstration class, by grade level (E)
- -Student teachers completing teacher training program (E)
- -Test performance levels of students enrolled in demonstration school (E)
- -Publications resulting from demonstration school projects (E)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.6 ACADEMIC ADMINSTRATION AND PERSONNEL DEVELOPMENT

Beneficiary Group Measures:

- Institutional administration (SP)
- Students, faculty, and staff who were actually involved or served by the activities of the department (SC)
- Groups of people that attended conferences (E)

Target Group Measures:

- Personnel development programs (SC)
- Institutional administrators interested in the support from each organizational unit in managing the resources of the institution (SC)
- Students, faculty, and staff supporting a particular organizational unit, such as a department, who intend to be served by the activities of the unit (SC)
- Activities intended to be conducted, e.g., conferences, collective bargaining (E)

Activity Measures:

- Student majors within department, by level of student (SC)
- Faculty and staff supervised within the department, by occupational activity category (SC)
- Applicants reviewed for faculty and staff positions, by occupational activity category (SC)

-Number and size of budgets administered, by funding source (SC)

-Activities administered, by type of activity, such as professional conferences, departmental meetings, sabbatical leaves, departmental retreats, and collective bargaining agreements (SC)

Outcome Measures:

-Personnel contracts renewed, by occupational activity category (SC)

-Personnel promoted, by occupational activity category (SC)

-Personnel turnover, by occupational activity category (SC)

-Faculty offers accepted as a percent of offers made (SC)

-Percentage of budgets overspent (underspent), by budgetary unit (SC)

4.0 ACADEMIC SUPPORT PROGRAM (Continued)

4.7 COURSE AND CURRICULUM DEVELOPMENT

Beneficiary Group Measures:

- Institutional administration that promoted developments in new courses and curriculum (SP)
- Student, faculty, and common-interest groups who were actually involved or served by new courses and changes in curriculum (SC)

Target Group Measures:

- Institutional administrators desiring to promote the development of new courses and curriculum (SP)
- Students, faculty, and common-interest groups supporting a particular organizational unit, such as a department, who intend to be served by the development of new courses and curriculum (SC)
- New courses and curriculum planned for inclusion in a department's program (SC)

Activity Measures:

- Plans for new or experimental instructional programs initiated (SC)
- Plans for new or experimental instructional programs in progress (SC)
- Plans for new or experimental instructional programs completed (SC)
- Studies of occupational or social needs as related to developing new programs (SC)

-Hours met by curriculum developing committee (SC)

-Hours spent developing course materials (E)

Outcome Measures:

-New or experimental instructional programs implemented as a percent of those programs developed (SC)

-New target or beneficiary groups served as a result of new experimental programs (SC)

5.0 STUDENT SERVICE PROGRAM

5.1 SOCIAL AND CULTURAL DEVELOPMENT

Beneficiary Group Measures:

- Students, common-interest groups, or community persons who were actually involved or served by social and cultural development programs (S)

Target Group Measures:

- Intended community population desiring to attend social and cultural development programs offered by the institution (SP)
- Intended population and common-interest groups who desire to contribute to or participate in social and cultural development programs (SP)
- Intended population and common-interest student groups who desire to contribute to or participate in a particular type of social or cultural development programs, such as student organizations, cultural events, or baseball (SC)
- Social and cultural events intended to be held (E)

Activity Measures:

- Types of activities or events offered (breadth of program), such as football, track, opera workshop (C)
- Weekly hours of scheduled activities, by type of social and cultural development program (E)

Outcome Measures:

-Social and cultural events held (SC)

-Students participating in social and cultural development programs, by type of program (E)

5.0 STUDENT SERVICE PROGRAM (Continued)

5.2 SUPPLEMENTARY EDUCATIONAL SERVICE

Beneficiary Group Measures:

- Matriculated students enrolled in supplementary educational services, by type of supplementary education service, such as short courses, tutorials, compensatory training (SC)
- Academic departments that enrolled supplementary education students who were able to meet the educational standards of the institution (SC)

Target Group Measures:

- Intended matriculated student population requiring assistance to meet the educational standards of the institution (SP)
- Intended matriculated student population requiring tutorial assistance in a specific course (SC)
- Intended matriculated student population requiring compensatory training to qualify for taking a course (SC)
- Intended matriculated student population needing special skills in connection with specific courses that can be obtained from short courses (SC)

Activity Measures:

- Types of supplementary instruction programs offered (breadth of program) (C)

-Students receiving supplementary instruction, by type of supplementary instruction program, such as remedial, tutorial, short course (SC)

-Weekly instructional hours scheduled, by type of supplementary instruction program (SC)

Outcome Measures:

-Students receiving tutorial assistance who satisfactorily complete the course (SC)

-Students taking compensatory training who are able to qualify for the courses involved (SC)

-Students completing educational services as a percent of those enrolled (SC)

5.0 STUDENT SERVICE PROGRAM (Continued)

5.3 COUNSELING AND CAREER GUIDANCE

Beneficiary Group Measures:

- Groups of people who received or were involved in counseling and career guidance services, such as students, organizational units, alumni (SP)
- Parents and family of students who participated in counseling and career guidance services (SP)
- Employers of students who received counseling and career guidance services (SC)

Target Group Measures:

- Students desiring counseling and career guidance services for purposes of personal development and vocational preparation, by type of service program, such as personal counseling, career guidance, and placement service (SP)
- Institutional organizations desiring to utilize counseling and career guidance services for purposes of meeting their unique objectives, such as administrative offices that require research data on student life, laboratory schools, and other professional programs that establish practicum programs in coordination with the counseling and career guidance programs (SP)

-Students desiring to obtain aid through a particular counseling or career guidance service, such as those with GPAs below a certain standard who seek personal counseling, students completing academic requirements who use the placement service in obtaining a job (SC)

-Alumni of the institution who seek jobs and desire to utilize the placement service for job and resume references (SC)

Activity Measures:

-Faculty and administrative committee assignments (SP)

-Contact with community referral resources, such as clinics, hospitals, schools (SP)

-Campus outreach activities, such as residence groups (SP)

-Attendance at professional conferences (SP)

-Papers given at conferences (SP)

-Students desiring services, by type of service, such as counseling career guidance, placement service (SC)

-Weekly hours of counseling sessions held, by type of service (SC)

-Tests given, by type of service and type of test (SC)

-Studies conducted, by type of service (SC)

-Companies scheduled to interview job applicants (SC)

-Employment opportunity newsletters distributed (SC)

-Weekly hours of practicum supervision within a particular discipline, such as elementary education, clinical psychology, sociology (E)

-Weekly hours of classroom teaching within a particular discipline (E)

Outcome Measures:

- -Students counseled as a percent of those students desiring services, by type of service (SC)
- -Statistical description of student sample served: age, sex, class, marital status, residence, type of problem, and progress in counseling, by type of service (SC)
- -Students changing field as a percent of those receiving career guidance (SC)
- -Job offers made as a percent of job interviews held (SC)
- -Job offers accepted as a percent of those students desiring jobs (SC)
- -Average number of job offers received per student desiring a job (SC)
- -Job offers accepted that match a student's educational preparation as a percent of the total number of job offers accepted (SC)

5.0 STUDENT SERVICE PROGRAM (Continued)

5.4 FINANCIAL AID

Beneficiary Group Measures

- -Students who actually received financial aid (SP)
- -Spouses and primary families of students who received aid (SP)
- -On-campus and off-campus employers hiring college work-study program students (SC)

Target Group Measures:

- -Students desiring financial assistance who qualify for financial needs, by economic level (SP)
- -Intended student population, by student status, such as entering freshmen, continuing undergraduate students, transfers, graduate students (SP)
- -Intended student population, by civil rights racial category: i.e., those in educational opportunity programs (EOP) (SP)
- -Intended student population, by sex (SP)
- -Intended special groups of student population, by type of group, such as students without parental support, international students, physically handicapped students, veterans, honor students or high academic achievers, or students in professional programs, such as nursing (SP)

Activity Measures:

- Total dollar amount of aid administered, by type of aid, such as a loan, grant, work-study (SC)
- Students requesting financial aid counseling (SC)
- Student aid applications processed, by level of student and socioeconomic group of students (SC)

Outcome Measures:

- Students attending institution who would not otherwise (C)
- Students granted aid as a percent of applicants (SC)
- Average dollar amount of aid granted, by type of aid (SC)
- Average percent of financial need met for those students granted aid (SC)
- Lag time between requesting aid and receiving confirmation of aid, by type of aid (SC)
- Loan defaults, by type of loan (E)

5.0 STUDENT SERVICE PROGRAM (Continued)

5.5 STUDENT SUPPORT

Beneficiary Group Measures:

- Students who were actually served by student support services (SP)
- Spouses and primary families (SP)
- Organizations providing student support services (SC)

Target Group Measures:

- Intended student population needing or desiring institutional services that support their livelihood in the institutional environment, such as food service, health service, housing, and retail services (C)
- Special students requiring student support services, by special student group, such as veterans, foreign students, the disadvantaged, the physically handicapped (C)
- Intended student population desiring institutionally provided housing services, by type of student interest, such as co-educational living, residential self-government, fraternal organizations, off-campus living, married housing (SC)
- Students desiring health services, by type of health service, such as emergencies, abortion referral, suicide prevention (SC)
- Students who are veterans and require aid in information services and processing of forms related to veterans' affairs (E)
- Intended student population living in dormitories who require institutionally provided food services (E)

Activity Measures:

- -Types of services rendered, such as food, health, housing, retail (C)
- -Types of special services provided, by special student group (SC)
- -Weekly hours student services are available, by type of service (E)
- -Students served or products rendered, by particular type of service, such as meals served by cafeteria, students housed in dormitories, outpatient vistis handled by health clinic

Outcome Measures:

- -Student medical cases healed as a percent of student medical cases handled (SC)
- -Referrals made to other public or private agencies for treatment of special cases, such as abortion, drug use (E)
- -Meals served as a percent of meals planned (E)
- -Turnover of student housing units available for occupancy (E)
- -Dollar amount of books sold by bookstore (E)
- -Students provided dormitory housing as a percent of students requesting dormitory housing (E)

6.0 INSTITUTIONAL SUPPORT PROGRAM

6.1 EXECUTIVE MANAGEMENT

Beneficiary Group Measures:

- -Groups of people who were actually aided by executive management activities, such as institutional members and organizations and community persons (SP)
- -The institution that remained viable through management and direction from its executives (SP)

Target Group Measures:

- -Current and potential programs of the institution (SP)
- -Members of the community who may become associated or involved with executive management activities conducted by the institution (SP)
- -Students, faculty and staff of the institution who are intended to be served by executive management activities (SP)
- -Organizations desiring to conduct activities within the jurisdictional area of the institution that require executive direction in the form of sanctions or policy guidelines (SC)

Activity Measures:

- -Executive meetings held, including those of governing boards (E)
- -Activities performed, by type of activity, such as, for legal services, number of cases handled; for physical planning, number of building projects proposed (E)

-Size of institutional budget administered (E)

-Staff supervised, by occupational activity category (E)

Outcome Measures:

-Basic policy questions raised, by originating interest group (SC)

-Activities successfully completed (in percent), by type of activity, e.g., for legal services, number of cases settled in favor of the institution as a percent of cases litigated; for physical planning, number of building projects approved as a percent of projects planned; for budgeting, size of budget approved as a percent of budget requested; for academic planning, number of programs approved as a percent of programs requested (E)

Note: Perhaps the outcomes of the executive management program should be measured in terms of the lack of activity in some areas, such as student disruptions, teacher strikes.

6.0 INSTITUTIONAL SUPPORT PROGRAM (Continued)

6.2 FISCAL OPERATIONS

Beneficiary Group Measures:

- -Groups of people who actually received fiscal management services (SP)
- -The institution that maintains its financial health (SP)
- -Grants and benefactors who provided funds that were utilized through sound fiscal management (SP)

Target Group Measures:

- -Programs as manifested in the financial structure of the institution (SP)
- -Boards of trustees and executive management in their positions of fudiciary responsibility (SP)
- -Students, faculty, and staff of the institution desiring services related to financial matters (SP)
- -Private persons or agencies known as institutional benefactors who are interested in the fiscal management of the funds they provide to the institution (SP)
- -Grantor agencies, which are usually public agencies, such as the National Science Foundation, interested in the fiscal management of the funds they provide to the institution (SP)
- -Reimbursement requirements as established by agreements with external agencies (C)
- -Program managers (SC)
- -External auditing agents, private and governmental (E)

Activity Measures:

- -Payroll checks written, by target group (E)
- -Additions and deletions made to the payroll (E)
- -Accounting transactions initiated (E)
- -Internal audits performed (E)
- -Budgetary units monitored (E)
- -Budget amendments processed (E)
- -Budget status reports prepared (E)
- -Number and size of research contracts and grants, by funding source (E)
- -Size of investment portfolio, by type of investment (E)
- -Endowment transactions handled (E)

Outcome Measures:

- -Total dollar amount of bad debts as a percent of the total dollar amount of accounts and notes receivable (E)
- -Financial indicators of endowments, such as rate of return, growth rate (E)
- -Purchase discounts lost as a percent of the total number of purchase discounts available (E)
- -Negotiated overhead rate on federal grants and contracts (E)
- -Percentage of budgets overspent, by budgetary unit (E)
- -Current funds investment income as a percent of total current funds (E)
- -Contract and grant renewals as a percent of renewable contracts and grants (E)
- -Current funds surplus (deficit) as a percentage of total current funds (E)

6.0 INSTITUTONAL SUPPORT PROGRAM (Continued)

6.3 GENERAL ADMINISTRATIVE SERVICES

Beneficiary Group Measures:

- -Groups of people who actually received general administrative services (SP)
- -Fund providers, such as institutional benefactors and grantor agencies, who benefit from sound management in terms of cost effectiveness (SP)
- -Labor organizations that have their constituency employed by the institution (SC)

Target Group Measures:

- -Programs of the institution as affected by general administrative services, such as applicant flow, space availability (SP)
- -Students, faculty, and staff of the institution who desire services resulting in sound administration of record files and space assignments (SP)
- -Governmental requirements for compliance in equal opportunity access to the institution (SC)
- -Intended enrollee population (applicants) (SC)
- -Labor organizations (SC)
- -Students, faculty, and staff employed by the institution desiring personnel services and other employee-related services dealing with insurance, retirement, etc. (SC)

- -Governmental agencies involved in the administration of employee benefits, such as unemployment compensation, workmen's compensation, etc. (SC)

Activity Measures:

- -Student requests for admission or transfer, by level of student (E)
- -Student transactions handled, by level of student, such as students registered, student grade transcripts processed (E)
- -Employee records file transactions processed, by personnel categories (E)
- -Fringe benefit transactions processed, by type of fringe benefit, such as health insurance, retirement, U.S. savings bonds (E)
- -Square feet in space inventory managed, gross and assignable (E)
- -Rooms scheduled, by room use classification (E)
- -Systems utilization time, in percent (E)
- -Computer scheduled maintenance time (E)
- -Cards read, number of jobs processed, lines printed, cards punched, etc. (E)
- -Time expended in systems development (E)
- -Time expended in applications programming (E)
- -Employee applications processed (E)
- -Employee training programs conducted, in man-weeks (E)
- -Employee grievances processed (E)
- -Unemployment compensation claims processed (E)
- -Workmen's compensation claims processed (E)

Outcome Measures:

-Average turnaround time, by job priority (E)

-Machine utilization time, in percent (E)

-Computer processing jobs successfully completed as a percent of total jobs submitted, by type of job, such as payroll, financial aid, purchase orders (E)

-Actual student matriculations as a percent of total students accepted for admission (E)

-Employees enrolled in training programs (E)

-Employees successfully completing training program as a percent of those enrolled (E)

-Employee reenrollments in training programs (E)

-Employee grievances (aired) solved satisfactorily (unsatisfactorily), by levels of administration (E)

-Average percentage of unfilled positions, by job type (E)

-Turnover rate of job postitions, by job type (E)

-Space utilization rate as a percent of the maximum utilization possible (E)

-Average student registration time (E)

6.0 INSTITUTIONAL SUPPORT PROGRAM (Continued)

6.4 LOGISTICAL SERVICES

Beneficiary Group Measures:

- -Students, faculty, and staff who actually received logistical services in the form of security, environmental safety, provision of materials and supplies, etc. (SP)
- -Suppliers of materials to the institution (SC)
- -Outside agencies that provided various services to the institution, such as transportation, telephone communication, reproduction (SC)

Target Group Measures:

- -Students, faculty, and staff of the institution needing logistical services for the conduct of their activities or tasks (SP)
- -Students, faculty, and staff needing security through environmental health and safety services, such as the police, campus security, fire protection, environmental safety (SC)
- -Property (real and personal) of the institution (SC)
- -Students, faculty, and staff needing materials and supplies for conducting their responsibilities (SC)

Activity Measures:

- -Tickets issued by campus police (E)
- -Calls responded to by campus police (E)
- -Fire alarms responded to by campus firemen (E)

-Bids let (E)

-Number and size of purchase orders processed (E)

-Number and size of shipments received and stored in warehouse (E)

-Items held in physical inventory (E)

-Total dollar amount of stores inventory (E)

-Motor vehicles maintained, by type of vehicle (E)

-Vehicle miles logged, by type of vehicle (E)

-Long distance telephone calls made, WATS vs. commercial rates (E)

-Telephones installed (E)

-Publications or job orders processed by campus printing shop (E)

-Pieces of mail processed, incoming and outgoing (E)

-Parking spaces assigned, by target group (E)

Outcome Measures:

-Dollar amount of fire and property damage to institutional property (E)

-Increase or decrease (in dollars or percent) in fire and property damage insurance premiums (E)

-Crimes committed on campus, by type of crime (E)

-Accidents occurring on campus, by type of accident (E)

-Service calls for repairs on motor vehicles, telephones, printing presses, and other equipment (E)

-Average delivery time for campus mail (E)

-Students, faculty, and staff receiving parking permits as a percent of applicants (E)

-Inventory turnover rate, in days (E)

-Inventoried items lost or stolen (E)

-Average time from request to delivery of items purchased or services desired (E)

6.0 INSTITUTIONAL SUPPORT PROGRAM (Continued)

6.5 PHYSICAL PLANT OPERATIONS

Beneficiary Group Measures:

- Students, faculty, and staff who actually received physical plant services that were adequate for the conduct of their activities (SP)
- Outside agencies that provided various physical plant services to the institution, e.g., power company (SC)

Target Group Measures:

- Students, faculty, and staff of the institution needing or desiring services that provide the physical conditions conducive to conducting their activities, such as building maintenance, electricity, heating, facility remodeling (SP)
- Institution's buildings, grounds, improvements, and equipment (SP)

Activity Measures:

- Amount of fuel consumed by heating plant (E)
- Kilowatts of electricity consumed (E)
- Gallons of water used (E)
- Acres of grounds maintained (E)
- New buildings constructed (by square feet) (E)
- Minor repair jobs completed, by type, such as painting, electrical work, plumbing, carpentry (E)
- Major remodeling jobs completed (E)

Outcome Measures:

- -Amount of BTUs of heat produced as a ratio of fuel consumed (E)
- -Amount of pollutants in the air or water (E)
- -Length of time between approval and completion of building or remodeling project (E)
- -Increase or decrease in amount of open space on campus, in acres (E)
- -Crisis maintenance calls (E)
- -Complaints about janitorial service (E)

6.0 INSTITUTIONAL SUPPORT PROGRAM (Continued)

6.6 FACULTY AND STAFF SERVICES

Beneficiary Group Measures:

- -Faculty and staff who were actually served by faculty and staff services (SP)
- -Organizations that provided various faculty and staff services, such as food vendors and services that were contracted (SC)

Target Group Measures:

- -Faculty and staff of the institution needing and eligible for staff services that support their livelihood in the institution environment, such as food service, health service, housing, and retail services (SP)
- -Faculty and staff desiring institutionally provided housing (SC)

Activity Measures:

- -Types of services rendered, such as food, health, housing, retail (C)
- -Weekly hours faculty and staff services are available, by type of service (E)
- -Faculty and staff served or products rendered, by particular type of service, such as the meals served by cafeteria, housing provided, outpatient visits handled by health clinic (E)

Outcome Measures:

- -Faculty and staff medical cases healed as a percent of faculty and staff cases handled (SC)
- -Referrals made to other medical facilities for treatment of special cases, such as psychiatric treatment, abortion, surgery (E)
- -Meals served as a percent of meals planned (E)
- -Occupancy rate of faculty and staff housing units available for occupancy (E)
- -Faculty and staff provided housing as a percent of faculty and staff requesting housing (E)

6.0 INSTITUTIONAL SUPPORT PROGRAM (Continued)

6.7 COMMUNITY RELATIONS

Beneficiary Group Measures:

- -People or groups of people who were involved in community relations activities (SP)
- -The institution that received financial support and goodwill from people or agencies outside the institution (SP)
- -Alumni who maintain their association with the institution (SC)

Target Group Measures:

- -All of the people within the political enclave of the institution (SC)
- -Alumni desiring to continue their association with the institution (SC)
- -Private persons or agencies known as institutional benefactors and grantor agencies (usually public agencies), desiring to provide funds for conducting institutional programs (SC)

Activity Measures:

- -Addresses or public presentations made (SC)
- -Head count of alumni (E)
- -Alumni clubs with active membership (E)
- -Alumni meetings held (E)
- -Publications mailed to alumni (E)
- -News releases written for media outside the institution (E)

-Visits made to area high schools (E)

-Fund-raising activities conducted, by type and funding source (E)

-Meetings with legislative and civic groups (E)

Outcome Measures:

-Percentage of total state revenues allocated (SP)

-Alumni participating in alumni activities as percent of total alumni (E)

-Alumni making donations as a percent of total alumni (E)

-Average alumni donation as a percent of alumni income (E)

-Total dollar amount of funds raised, by funding source (E)

-Total dollar amount of research grants (E)

-Total dollar amount of endowment gifts (E)

-Average size of endowment gift (E)

7.0 INDEPENDENT OPERATIONS PROGRAM

7.1 INSTITUTIONAL OPERATIONS

Beneficiary Group Measures:

- The institution and special interest groups that were actually involved in institutional operations (SP)

Target Group Measures:

- The institution and special interest groups that intend to be involved with institutionally owned or controlled operations (SP)

Activity and Outcome Measures:

Note: The institution must identify those measures relating to institutional operations that are unique to that specific enterprise, such as commercial rental property or business enterprises.

7.2 OUTSIDE AGENCIES

Beneficiary Group Measures:

- -Special agencies or interest groups outside of the institution that were actually supported by the institution in the form of housing or other support (SP)
- -The institution that benefits from the activities of the outside agency (SP)

Target Group Measures:

- -Special agencies or interest groups outside of the institutional organization structure intended to be housed or otherwise supported by the institution, e.g., Western Interstate Commission for Higher Education,which has its offices on the campus of the University of Colorado (SP)

Activity and Output Measures:

Note: The institution must identify those measures relating to outside agencies with which the respective institution is involved.

APPENDIX D

LATEST DRAFT OF THE
INVENTORY OF HIGHER EDUCATION OUTCOME
VARIABLES AND MEASURES

[Micek and Wallhaus, 1973]

OUTLINE OF THE INVENTORY OF HIGHER EDUCATION OUTCOME VARIABLES AND MEASURES

- 1.0 Student Growth and Development
  - 1.1.0 Knowledge and Skills Development
    - 1.1.1.00 Knowledge Development
      - 1.1.1.01 General Knowledge
      - 1.1.1.02 Specialized Knowledge
    - 1.1.2.00 Skills Development
      - 1.1.2.01 Application of Knowledge Skills
      - 1.1.2.02 Critical Thinking and Reasoning Skills
      - 1.1.2.03 Creativity Skills
      - 1.1.2.04 Communication Skills
      - 1.1.2.05 Motor Skills
    - 1.1.3.00 Knowledge and Skills Attitudes, Values, and Beliefs
      - 1.1.3.01 Intellectual Disposition
  - 1.2.0 Social Development
    - 1.2.1.00 Social Skills
      - 1.2.1.01 Interpersonal Participation
      - 1.2.1.02 Leadership
      - 1.2.1.03 Citizenship
    - 1.2.2.00 Social Attitudes, Values and Beliefs
      - 1.2.2.01 Political
      - 1.2.2.02 Racial/Ethnic
      - 1.2.2.03 Personal Ethics

- 1.2.2.04 Social Conscience
- 1.2.2.05 Socioeconomic Aspirations
- 1.2.2.06 Cultural Interest

- 1.3.0 Personal Development
  - 1.3.1.00 Student Health
    - 1.3.1.01 Physical Health
    - 1.3.1.02 Mental Health
  - 1.3.2.00 Student Personal Attitudes, Values, and Beliefs
    - 1.3.2.01 Religious and Spiritual
    - 1.3.2.02 Change/Stability
    - 1.3.2.03 Self-Concept

- 1.4.0 Career Development
  - 1.4.1.00 Career Preparation
    - 1.4.1.01 Academic Preparation
    - 1.4.1.02 Vocational Preparation
  - 1.4.2.00 Career Attitudes, Values, and Beliefs
    - 1.4.2.01 Achievement Orientation
    - 1.4.2.02 Educational Aspirations
    - 1.4.2.03 Educational Satisfaction
    - 1.4.2.04 Vocational Aspirations

2.0 Development of New Knowledge and Art Forms

- 2.0.0.01 Discovery of New Knowledge
- 2.0.0.02 Interpretation and Application of New Knowledge
- 2.0.0.03 Reorganization of New Knowledge

3.0 Community Development and Service

3.1.0 Community Development

- 3.1.0.01 Community Educational Development
- 3.1.0.02 Faculty/Staff Educational Development

3.2.0 Community Service

- 3.2.0.01 Extension Services
- 3.2.0.02 Personal Services
- 3.2.0.03 Extramural Cultural and Recreational Services
- 3.2.0.04 Financial Impact on the Community

3.3.0 Longer Term Community Effects

- 3.3.0.01 Social Impact
- 3.3.0.02 Economic Impact

OUTCOME VARIABLES	POTENTIAL MEASURES
1.0 Student Growth and Development 1.1.0 Knowledge and Skills Development 1.1.1.00 Knowledge Development 1.1.1.01 General Knowledge The familiarity with and understanding of facts and principles across several broad fields. The student's breadth of knowledge.	Note: Many of the measures listed in 1.4.0 Career Development may also apply in 1.1.0. 1.1.1.01 General Knowledge Measures - Average student score on those items from selected standardized tests (e.g., CLEP - General Exam; SAT Area Exam) that measure breadth of knowledge.* - Average student change in breadth of knowledge as determined by comparing entering general knowledge aggregate scores to subsequent aggregate scores (e.g., on CLEP, the GRE or SAT Area Exams) after ____ years. - Average student-reported score on a scale measuring degree of satisfaction with breadth of knowledge (based on student survey).

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*Standardized measures are referenced at the end of this inventory.

OUTCOME VARIABLES	POTENTIAL MEASURES
1.1.1.02 Specialized Knowledge The familiarity with and understanding of facts and principles in the particular fields in which the student elects to study. The student's depth of knowledge.	1.1.1.02 Specialized Knowledge Measures - Average student score on those items from selected standardized tests (e.g., CLEP Subject Exams, or GRE Area Exams) that measure depth of knowledge in special fields of study. - Average student change in depth of knowledge by discipline area as determined by comparing entering specialized knowledge aggregate scores to subsequent aggregate scores (e.g., on CLEP Subject Exams or GRE Area Exams) after ____ years. - Number of graduates accepting employment in their major field of study as a percentage of total graduates in that field. - Number of students passing certification or licensing exams (e.g., bar exam, CPA) on first attempt as a percentage of all students taking the exam. - Average student-reported score on scale measuring degree of satisfaction with their knowledge gain in specialized fields of study (based on student survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
1.1.2.00 Skill Development 1.1.2.01 Application of Knowledge Skills The ability to relate general or specialized knowledge to a relevant problem and to implement a solution. Also, the ability to locate, retain, and filter relevant knowledge.	1.1.2.01 Application of Knowledge Skills Measures - Average student score on those items from selected standardized tests (e.g., CLEP Subject Exams, GRE or SAT Area Exams, or the OPI-Thinking Introversion Scale) that measure ability to apply general or specialized knowledge. - Average student change in ability to apply knowledge as determined by comparing entering ability aggregate scores to subsequent aggregate scores (e.g., on CLEP Subject Exams, the GRE or SAT Area Exams) after ____ years. - Average student- and/or graduate-reported score on a scale measuring degree of satisfaction with their ability to apply what they know both in breadth and depth (based on student and/or former student survey).
1.1.2.02 Critical Thinking and Reasoning Skills The ability to formulate and analyze problems and to employ rational processes to achieve increased understanding (e.g., the recognition of biased points of view in a speech or a book; the recognition of cause-and-effect relationships).	1.1.2.02 Critical Thinking and Reasoning Skills Measures - Average student score on selected standardized tests (e.g., OPI-Theoretical Scale; KIT-Critical Thinking Index, Critical Thinking Orientation Scale, or Critical Thinking Benefits Scale; AVL-Theoretical Scale) that measure ability to formulate and analyze problems. - Average student change in ability to formulate and analyze problems as determined by comparing entering critical thinking ability scores on selected standardized tests (e.g., OPI-Theoretical Scale; KIT-Critical Thinking Index, Critical

OUTCOME VARIABLES	POTENTIAL MEASURES
	Thinking Orientation Scale, or Critical Thinking Benefits Scale; AVL-Theoretical Scale) to subsequent scores after ____ years. - Average student-reported score on scale measuring degree of satisfaction with their ability to apply what they know both in breadth and depth (based on student survey). - Percentage of courses taken that are classified as emphasizing critical thinking and reasoning.
1.1.2.03 Creativity Skills The ability to design, produce, or otherwise bring into existence original perspectives, explanations, and implementations (e.g., the production of unique communication; the development of an effective plan or solution to a problem).	1.1.2.03 Creativity Skills Measures - Average student score on selected standardized tests (e.g., OPI-Complexity of Outlook Scale; KIT-Art Scale, Music Scale, Literature Scale, or Drama Scale; AVL-Aesthetic Scale) that measure the ability to create original perspectives, explanations, and implementations. - Average student change in ability to create original perspectives, explanations, and implementations as determined by comparing entering creative ability scores on selected standardized tests (e.g., OPI-Complexity of Outlook Scale; KIT-Art Scale, Music Scale, Literature Scale, or Drama Scale; AVL-Aesthetic Scale) to subsequent scores after ____ years. - Average student-reported score on a scale measuring degree of satisfaction with their ability to create original perspectives, explanations, and implementations (based on student survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Percentage of courses taken that are classified as emphasizing creativity. - Number of patents awarded/copyrights obtained by former students within the past ____ years (based on former student survey).
1.1.2.04 Communication Skills The ability or competence to read, write, speak, and listen. The ability to convey information, attitudes, emotions, etc.; and also the ability to receive and interpret communications. This outcome variable also encompasses nonoral, nonwritten expression and perception.	1.1.2.04 Communication Skills Measures - Average student score on selected standardized tests that measure the ability to communicate. - Average student change in ability to communicate as determined by comparing entering scores on selected standardized tests to subsequent scores after ____ years. - Percentage of courses taken that are classified as emphasizing communication skills. - Number of students participating in debate, encounter groups, etc., as a percentage of all students.
1.1.2.05 Motor Skills The ability or competence in tasks requiring manual dexterity and skill.	1.1.2.05 Motor Skills Measures - Average student score on selected standardized tests that measure motor skills. - Average student change in motor skills as determined by comparing entering skill scores to subsequent scores after ____ years. - Number of students participating in intramural and varsity athletics as a percentage of all students. - Percentage of courses taken that are classified as emphasizing motor skills.

OUTCOME VARIABLES	POTENTIAL MEASURES
1.1.3.00 Knowledge and Skills Attitudes, Values, and Beliefs	
1.1.3.01 Intellectual Disposition The desire to continue self-initiated study and inquiry for its own sake and/or for personal enjoyment.	1.1.3.01 Intellectual Disposition Measures - Average student change in perception and evaluation of their interest in continued self-initiated study and inquiry as determined by comparing entering scores on selected, standardized tests (e.g., AVL-Intellectual Scale; KIT-Intellectual Orientation Scale; SAI-Understanding Scale) to subsequent scores after ____ years. - Number of students taking noncredit, independent study, or special courses as a percentage of total students. - Average student-reported score on a scale measuring their evaluation and perception of the amount of learning that took place outside of formal instruction (based on student survey). - Number of library books checked out per student over a specified period of time.
1.2.0 Social Development	
1.2.1.00 Social Skills	
1.2.1.01 Interpersonal Participation The ability to live and interact with others. This variable may be further disaggregated into such categories as cooperation, friendly companionship, and organizational skills the ability to handle stress, isolation, and bias.	1.2.1.01 Interpersonal Participation Measures - Students and/or graduates holding membership in social, charitable, political, or civic organizations. (Average number of memberships per student and/or graduate based on student and/or former student surveys.)

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Awards and citations earned by students and/or graduates for social contributions. (Average number of awards/citations per student and/or graduate based on student and/or former student surveys.) - Student and/or graduate perceptions and evaluations of their interpersonal participation as determined by standard measures (e.g., AVL-Social Scale; CUES-Community Scale; F-Scale; KIT-Interpersonal Index; Learning: Experiential Scale and Feeling About Other People Scale; ISS-Social Subscale of Institutional Goals Section). - Average number of friends and/or acquaintances reported per student (based on student survey).
1.2.1.02 Leadership The ability to establish directions or courses of action and influence others to follow.	1.2.1.02 Leadership Measures - Students and/or graduates elected to positions in local, state, and federal government. (Average number of positions held per student and/or graduate based on student and/or former student surveys.) - Students and/or graduates holding office in social, charitable, political, or civic organizations. (Number of offices held per student and/or graduate based on student and/or former student surveys.) - Students and/or graduates participating in special social development programs (e.g., the Peace Corps and VISTA). (Number of incidents of participation per student and/or graduate based on student and/or former student surveys.)

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Percentage of graduates in management positions by the __th year following graduation (based on former student survey). - Student and/or graduate perceptions and evaluations of their leadership ability as determined by selected standard measures (e.g., AVL-Political; F-Scale).
1.2.1.03 Citizenship The ability to perform relative to the rights, duties, and privileges of a member of a community, state, or nation.	1.2.1.03 Citizenship Measures - Percentage of students and/or graduates who voted in the last general election (based on student and/or former student surveys). - Average amount of monetary contributions per individual made to political, religious, and social organizations or special interest groups over past year relative to income category (based on student and/or former student surveys). - Student and/or graduate perceptions and evaluations of their performance as citizens as determined by selected standard measures (e.g., KIT-Community Affairs Scale, National and State Politics Scale, and International and Intercultural Affairs Scale). - Average number of hours per month devoted to political, religious, and social organizations or special interest groups over the past year per student (based on student and/or former student surveys).

OUTCOME VARIABLES	POTENTIAL MEASURES
1.2.2.00 Social Attitudes, Values, and Beliefs	
1.2.2.01 Political Attitudes toward systems of government, including the processes, institutions, conventions, and the level of political participation.	1.2.2.01 Political Attitude Measures - Percentage of students and/or graduates belonging to or holding office in political organizations (based on student and/or former student surveys). - Student and/or graduate perceptions and evaluations of their political attitudes and beliefs as determined by selected standard measures (e.g., AVL-Political Scale; F-Scale; KIT-National and State Politics Scale, Community Affairs Scale, National Status and World Security Scale, Freedom of Expression Scale, Societal Viewpoints Scale). - Percentage of former students utilizing mechanisms of the political process; e.g., petitions circulated, hearings attended, letters written, lobbying activities (based on former student survey).
1.2.2.02 Racial/Ethnic Attitudes toward races or national origins other than one's own.	1.2.2.02 Racial/Ethnic Attitude Measures - Student and/or graduate perceptions and evaluations of their racial and ethnic attitudes and beliefs as determined by selected standard measures (e.g., KIT-Minority Problems Scale; E-Scale).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Number of students and/or former students who are partners in an interracial marriage as a percentage of survey sample (based on student and/or former student surveys). - Number of ethnic minority students elected to student offices as a percentage of total elective student offices held.
1.2.2.03 Personal Ethics Ethical and moral values that affect an individual's actions and thoughts toward others. The sense of what is right or wrong in one's conduct and motives in dealings between individuals and groups.	1.2.2.03 Personal Ethics Measures - Student and/or graduate perceptions and evaluations about their ethical and moral values as determined by standard measures (e.g., AVL-Religious Scale and Social Scale; KIT-Feelings About Other People Scale). - Number of felony and misdemeanor arrests during last ____ years as a percentage of total former students surveyed (based on former student survey).
1.2.2.04 Social Conscience The concern for human welfare. The importance placed on human interests, values, and conditions.	1.2.2.04 Social Conscience Measures Note: Many of the measures suggested in 1.2.1.01 Interpersonal Participation and 1.2.1.03 Citizenship also apply here. - Student and/or graduate perceptions and evaluations about their concern for human welfare as determined by standard measures (e.g., AVL-Social Scale; KIT-Societal Viewpoints Scale, Human Relations Scale, Societal Priorities Scale; OPI-Social Maturity Scale; SAI-Humanism Scale).

OUTCOME VARIABLES	POTENTIAL MEASURES
1.2.2.05 Socioeconomic Aspirations The importance attached to one's socioeconomic status.	1.2.2.05 Socioeconomic Aspirations Measures - Student and/or graduate average reported score on scales measuring perceptions and evaluations of their current and desired social and economic level (based on student and/or former student surveys).
1.2.2.06 Cultural Interest The interest in and acquaintance with arts, manners, scholarly pursuits, and other qualities that characterize civilizations.	1.2.2.06 Cultural Interest Measures - Student and/or graduate perceptions and evaluations of their interest in culture as determined by selected standard measures (e.g., KIT-Educational Benefits: Humanistic Scale). - Percentage of courses (credit and/or noncredit) taken that are classified as emphasizing cultural interests.

OUTCOME VARIABLES	POTENTIAL MEASURES
1.3.0 Personal Development	
1.3.1.00 Student Health	
1.3.1.01 Physical Health The physical well-being of the individual.	1.3.1.01 Physical Health Measures - Percentage of students and/or graduates reporting physical illnesses, by type of illness (based on student and/or former student surveys).
1.3.1.02 Mental Health The mental well-being of the individual.	1.3.1.02 Mental Health Measures - Percentage of students and/or graduates reporting mental illnesses, by type of illness (student and/or former student survey). - Percentage of students participating in special mental health counseling programs.
1.3.2.00 Student Personal Attitudes, Values, and Beliefs	
1.3.2.01 Religious and Spiritual Attitudes toward and adherence to the conventions, practices, and teachings of religious organizations or sects.	1.3.2.01 Religious and Spiritual Attitude Measures - Percentage of students and/or graduates belonging to or holding office in religious organizations (based on student and/or former student surveys). - Student and/or graduate perceptions and evaluations of their religious and spiritual attitudes and beliefs as determined by selected standard measures (e.g., AVL-Religious Scale; KIT-Religion Scale and General Values & Ideologies Scale; OPI-Religious Liberalism Scale; SAI-Reflectiveness Scale; T-CR).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Average monetary cortribution per former student to religious organizations relative to income category (based on former student survey).
1.3.2.02 Change/Stability Attitudes toward new and different ideas relationships, products, or methods. The desire to introduce, avoid, or be associated with changes.	1.3.2.02 Change/Stability Attitude Measures - Student and/or graduate perceptions and evaluations about their attitudes and beliefs toward new and different things as determined by selected standard measures (e.g., KIT-Areas and Agents of Change Scale, Involvement in Campus Reforms Scale; Rokeach Dogmatism Scale). - Average number of changes in employment per former student during the past ____ years (based on former student survey).
1.3.2.03 Self-Concept The feeling and acceptance of one's self as having basic worth and value.	1.3.2.03 Self-Concept Measures Student and/or graduate perceptions about oneself as determined by selected standard measures (e.g., KIT-Feelings About Self Scale).

OUTCOME VARIABLES	POTENTIAL MEASURES
1.4.0 Career Development 1.4.1.00 Career Preparation 1.4.1.01 Academic Preparation The ability to seek, gain, and maintain a particular level and kind of academic pursuit.	1.4.1.01 Academic Preparation Measures - Average number of awards and citations received per graduate for academic performance (based on former student survey). - Percentage of graduates working toward or receiving an advanced degree or certificate ____ years after graduation (based on former student survey). - Percentage of graduates enrolled in graduate school ____ years after graduation (based on former student survey). - Average student and/or graduate-reported score on a scale measuring the degree of satisfaction with their academic performance (based on student and/or former student surveys). - Number of dropouts during the past year as a percentage of their academic rank or the total institution enrollment. - Number of students graduating from the institution after ____ years as a percentage of the entering cohort. - Number of graduates who transferred in as a percentage of total graduates for the year.

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Percentage of students changing major (lower division, upper division, and/or graduate) during the past year.
1.4.1.02 Vocational Preparation The ability to seek, gain, and maintain a particular level and kind of employment.	1.4.1.02 Vocational Preparation Measures - Percentage of graduates employed within ____ days after graduation (based on former student survey). - Average first salary of graduates (based on former student survey). - Average income category for graduates after ____ years (based on former student survey). - Percentage of dropouts employed within ____ days after dropping out (based on former student survey of dropouts). - Average score of dropouts on a scale measuring the degree of satisfaction with their vocational performance (based on former student survey of dropouts). - Average number of professional awards and citations received by graduates (based on former student survey). - Percentage of graduates in management positions by the ____ th year following graduation (based on former student survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Average score reported by graduates on a scale measuring satisfaction with their vocational performance (based on former student survey). - Number of former students who desire to have their children follow the same career field as a percentage of the total number of former students surveyed (based on former student survey). - Number of voluntary/involuntary changes in employment over given time periods as a percentage of the total former students surveyed (based on former student survey). - Percentage of total graduates employed in-state versus out-of-state. - Number of voluntary/involuntary changes in career field over given time periods as a percentage of total former students surveyed (based on former student survey).
1.4.2.00 Career Attitudes, Values, and Beliefs 1.4.2.01 Achievement Orientation The importance placed upon accomplishments; i.e., successfully completing work that is valued by the individual and/or society. Impact or benefit as viewed by the student and/or the larger society.	1.4.2.01 Achievement Orientation Measures - Student and/or graduate perceptions and evaluations of achievement as determined by selected standard measures (e.g., KIT-Feelings About the Future Scale).

OUTCOME VARIABLES	POTENTIAL MEASURES
1.4.2.02 Educational Aspirations The educational degree and/or competency level desired and valued by students and/or graduates.	1.4.2.02 Educational Aspirations Measures - Percentage of students identifying the ___ degree (none, associate, bachelor's, master's, doctoral, other) as the highest degree planned (based on student survey). - Percentage of graduates working toward or receiving an advanced degree ___ years after graduation (based on former student survey).
1.4.2.03 Educational Satisfaction The degree of student satisfaction with their educational experience.	1.4.2.03 Educational Satisfaction Measures - Number of former students who intend to send their children to the same school as a percentage of total number of students surveyed (based on former student survey). - Average amount of alumni gifts ____ years after graduation. - Average student- and/or graduate-reported score on a scale measuring the degree of satisfaction with their educational experience (based on student and/or former student surveys).
1.4.2.04 Vocational Aspirations The level of attainment in a profession desired by students and/or graduates.	1.4.2.04 Vocational Aspirations Measures - Average first salary expectations of students (based on student survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Percentage of students and/or graduates seeking certain professional levels in society (based on student and/or former student surveys).
2.0 Development of New Knowledge and Art Forms	
2.0.0.01 Discovery of New Knowledge The identification and development of new knowledge, theories, and products without regard to practical application.	2.0.0.01 Discovery of New Knowledge Measures - Average number of basic research publications per student, graduate, and/or faculty member over a given time period (based on student, former student, and/or faculty surveys). - Average number of times a given basic research publication is cited in bibliographies of other authors over a given time period (based on publications listed in Science Citation Index). (Note: both frequency and the time interval over which citations are made should be considered.) - Average percentage of faculty time spent in selected basic research activities (based on NCHEMS Faculty Activity and Outcome Survey - B.1 Specific Research Projects). - Average number of proposals funded for the development of new ideas and products during _____ year(s). - Total dollar amount of gifts and/or grants received for the development of new ideas and products without concern for practicality as a percentage of total budget for ____ year(s).

OUTCOME VARIABLES	POTENTIAL MEASURES
2.0.0.02 Interpretation and Application of New Knowledge The development and use of new knowledge, theories, and products with regard to practical application.	2.0.0.02 Interpretation and Application of New Knowledge Measures - Average number of applied research, development, and evaluation publications per student, graduate, and/or faculty member (based on student, former student and/or faculty surveys). - Average percentage of time spent by faculty in selected applied research, development, and evaluation activities (based on NCHEMS Faculty Activity and Outcome Survey - B.1 Special Research Projects, E.2 Professional Service and Advice, and F.1 Academic Activity Outside the Institution). - Average number of awards and citations received per student, former student, and/or faculty member for applied research, development, and evaluation efforts (based on student, former student and/or faculty surveys). - Average number of applied research, development, and evaluation proposals funded during past ___ year(s). - Total dollar amount of gifts, contracts, or grants received for applied research, development, and evaluation as a percentage of total budget for ___ year(s).

OUTCOME VARIABLES	POTENTIAL MEASURES
	- Average number of patents and/or copyrights received per student, former student, and/or faculty member over a given time period (based on student, former student and/or faculty surveys).
2.0.0.03 Reorganization of New Knowledge The synthesis of existing theories, findings, and statements in order to present existing knowledge in a new form designed to be more readily comprehensible or usable (e.g., new textbooks, written articles, and oral communications).	2.0.0.03 Reorganization of New Knowledge Measures - Average number of textbooks, monographs, etc., published per faculty member (based on faculty survey). - Average percentage of faculty time spent in reorganizing existing knowledge (based on NCHEMS Faculty Activity and Outcome Survey - A.4 Course and Curriculum Development). - Average number of films, taped lectures, etc., developed per faculty member (based on faculty survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
3.0 Community Development and Service 3.1.0 Community Development	
3.1.0.01 Community Educational Development The growth and development of members of the community who are not working toward a degree or certification, but who are taking advantage of continuing education opportunities offered.	3.1.0.01 Community Educational Development Measures Note: Measures listed in 1.1.1.01 General Knowledge, 1.1.1.02 Specialized Knowledge, 1.1.2.01 Application of Knowledge, 1.1.2.02 Critical Thinking and Reasoning Skills, and 1.1.2.03 Creativity can also be utilized as indicators of Community Educational Development. - Number of nonmatriculating students enrolled in instructional programs as a percentage of the total number of students in those programs.
3.1.0.02 Faculty/Staff Educational Development The growth and development of faculty and staff either through their instruction, research, or management activities or through the continuing education opportunities offered.	3.1.0.02 Faculty/Staff Educational Development Measures - Percentage of faculty/staff who are taking courses in the institution. - Percentage of faculty time spent in selected activities (based on NCHEMS Faculty Activity and Outcome Survey - B.2 General Scholarship and Creative Work, F.1 Academic Activity Outside the Institution). - Faculty perceptions and evaluations of their educational growth and development (based on faculty survey).

OUTCOME VARIABLES	POTENTIAL MEASURES
3.2.0 Community Service 3.2.0.01 Extension Services The extent to which the community receives direct assistance and services of various types from the primary programs of the institution (e.g., agriculture extension service, other noninstructional extension activities, faculty/staff consulting).	3.2.0.01 Extension Services Measures - Average percentage of faculty time spent in selected activities (based on NCHEMS Faculty Activity and Outcome Survey - E.2 Professional Service and Advice, F.1 Academic Activity Outside the Institution, F.2 Paid Professional Service). - Estimated replacement value of specific extension services received by individuals or organizations that receive the services. - Ratio of total income for extension services to total budget for extension services. - Income produced through extension services, as a percentage of the cost of offering the service(s).

OUTCOME VARIABLES	POTENTIAL MEASURES
3.2.0.02 Personal Services The extent to which individuals in the community receive direct personal services of various types through the support programs and facilities of the institution (e.g., medical clinics that serve the general community, nursery schools, access to the library, and computer center).	3.2.0.02 Personal Services Measures - Number of individuals not associated with the institution who were served by a particular support program as a percentage of the total number of individuals served over a given time period. - Estimated monetary value of specific personal services offered relative to other comparable services offered elsewhere.
3.2.0.03 Extramural Cultural and Recreational Services The availability and utilization of the recreational and cultural opportunities offered through the institution to the community (e.g., sporting events, the performing arts, museum exhibits, and concerts).	3.2.0.03 Extramural Cultural and Recreational Services Measures - Estimated number of nonstudents, nonfaculty, and nonstaff attending selected extramural events as a percentage of the total number attending.

OUTCOME VARIABLES	POTENTIAL MEASURES
3.2.0.04 Financial Impact on the Community The economic benefits or costs directly and indirectly accruing to the community as a result of the operation of the institution, including such elements as: 1) purchases of goods and services by the institution, its students, and its faculty; 2) students available as employees; 3) drawing power of the community for industry and as a place of residence for employees.	3.2.0.04 Financial Impact on the Community Measures - Total dollar amount of goods and services purchased by the institution from a particular sector of the community during the past year. - Estimated average dollar amount of expenditures by students in the community. - Number of students employed in businesses, agencies, and organizations in the community as a percentage of the total student enrollment (based on student survey). - Total dollar amount of the institution's payroll as a percentage of the estimated total community payroll.

OUTCOME VARIABLES	POTENTIAL MEASURES
3.3.0 Longer Term Community Effects	
3.3.0.01 Social Impact The long-term social effects of the institution, primarily through its former students, on the community of the institution.	3.3.0.01 Social Impact Measures Note: Many of the measures listed in Section 1.2.0 Social Development and 1.3.0 Personal Development can be applied equally well over long time periods and also to children of former students if attempts are made to identify intergenerational effects.
3.3.0.02 Economic Impact The long-term economic effect of the institution, primarily through its former students, on the community.	3.3.0.02 Economic Impact Measures Note: Many measures listed in Sections 1.2.2.05 Socioeconomic Aspirations, 1.4.1.02 Vocational Preparation, 1.4.2.04 Vocational Aspirations, and the research-oriented outcome indicators in Section 2.0 Development of New Knowledge and Art Forms can be applied equally well over long time periods.

KEY

AVL	Allport, G. W.; Vernon, P. E.; and Lindzey, G. *A Study of Values: Manual*. 3rd ed. Boston: Houghton Mifflin, 1960.
CCI	Stern, G. G. *Scoring Instructions and College Norms for the Activities Index and the College Characteristics Index*. Index. Syracuse N.Y.: Psychological Research Center, Syracuse University, 1963.
CLEP	Educational Testing Service. *Tests and Services: College Level Examination Program*. Berkeley: College Entrance Examination Board.
CUES	Pace, C. R. *Preliminary Technical Manual: College and University Environment Scales*. Princeton: Educational Testing Service.
E and F Scales	Adorno, T. W.; Frenkel-Grunswick, E.; Levinson, D. J.; and Sanford, R. N. *The Authoritarian Personality*. New York: Harper. 1950.
GRE	Educational Testing Service. *The Graduate Record Examinations*. The Area Tests, Aptitude Test, Advanced Tests. Princeton, N. J.: Educational Testing Service, current date.
ISS	American College Testing Program. *Manual for the ACT Institutional Self-Study Survey*. Iowa City: Author, 1969.
KIT	Higher Education Program Staff. *Higher Education Measurement and Evaluation KIT*. Field Ed. Los Angeles: Center for the Study of Evaluation, University of California, 1971.
NCHEMS FAOS	Romney, Leonard C. *Faculty Activity Procedures Manual*. Boulder, Colo.: Western Interstate Commission for Higher Education, forthcoming.
OPI	Center for the Study of Higher Education. *Omnibus Personality Inventory: Research Manual*. Berkeley: University of California, 1962.
Rokeach Dogmatism Scale	Rokeach, M. *The Open and Closed Mind*. New York: Basic Books, 1960.
SAT	Educational Testing Service. *College Entrance Examination Board Admissions Testing Program: Scholastic Aptitude Test*. Achievement Tests, Supplementary Achievement Tests. Princeton, N.J.: Author, current date.

Science Citation Index	Published by the Institute for Scientific Information, Philadelphia, Pennsylvania.
T-CR	Thurstone, H. H. and Chave, E. J. The Measurement of Attitude: A Psychological Method and Some Experiments with a Scale for Measuring Attitudes Toward the Church. Chicago. University of Chicago Press, 1929.

APPENDIX E

DISPLAY OF
PROGRAM MEASURES

The purpose of this appendix is to display program measures data that describes the activities of program elements at various levels of the Program Classification Structure.

The display will consist of several examples of program measures for the instruction program of a business school. These program measures will attempt to describe the resources utilized, the activity levels generated, the groups served, the expenditures incurred, the revenues generated, and the outcomes achieved for three levels of the Program Classification Structure to which the business school programs are associated -- the program element level, the program subcategory level, and the program category level.

The six program measures groups will be illustrated on separate forms in the following order:

1. Beneficiary Group Measures
2. Target Group Measures
3. Resource Measures
4. Financial Measures
5. Activity Measures
6. Outcome Measures

It is emphasized that this appendix is not intended to prescribe any uses or interpretations of the displayed data; rather it is intended to present examples of program measures based on the relationship between the PCS and program measures described in Chapter II of this document.

1. BENEFICIARY GROUP MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
Note: Subgroups are not identified for this program measures group	Numbers of People/ Groups	Students actually taking business courses Community persons actually taking business courses as special students Employers of business graduates Economic society in general or certain segments thereof	600 75 25 -	Students actually taking accounting courses Special students actually taking accounting courses Employers of graduates with an accounting major Accounting profession	120 10 8 —	Special students actually taking accounting courses Students passing the course to qualify for higher level courses Accounting department	8 85 —

2. TARGET GROUP MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
Note: Subgroups are not identified for this program measures group.	Numbers of People/ Groups	Students desiring to pursue a career in business	1,000	Students desiring to pursue a career in accounting	200	Students requiring the course as a prerequisite for taking other courses	200
		Students in other fields of study desiring to take business as a minor field or elective	100	Students in other fields of study desiring to take accounting courses as electives or for a minor field	30	Students and other special students desiring a background in accounting principles	50
		Community persons desiring to take business courses as special students	100	Community persons desiring to take accounting courses as special students	20		
		Employment groups desiring to hire business graduates	50	Accounting and other business firms desiring to hire graduates with an accounting major	12		

3. RESOURCE MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
PERSONNEL	FTE	Professors	1.5	Professors	.5	Assistant Professors	.5
		Associate Professors	1.0	Assistant Professors	.5	Teaching Assistants	.5
		Assistant Professors	1.5	Teaching Assistants	.5		
		Teaching Assistants	1.0				
FACILITIES	Station Count	Small Classroom, Room 130	20	Small Classroom, Room 132	30	Large Classroom, Room 102	100
		Small Classroom, Room 132	30	Large Classroom, Room 102	100	Accounting Laboratory	40
		Large Classroom, Room 150	60	Accounting Laboratory	40		
		Large Classroom, Room 102	100				
		Accounting Laboratory	40				
		Management Sc. Laboratory	50				
EQUIPMENT	Units	Remote computer terminal	1	Friden electronic calculators	3	Friden electronic calculators	2
		Friden electronic calculators	6	IBM manual calculators	15	IBM manual calculators	12
		IBM manual calculators	25	Individual armchair desks	100	Individual armchair desks	100
		IBM 026 Key punches	5	Conference desks	17	Conference desk	1
		Individual armchair desks	160				
		Conference desks	30				
SUPPLIES AND SERVICES	Units	Number of boxes of computer printout paper	150	Number of rolls of calculator paper	175	Number of rolls of calculator paper	100
		Number of boxes of IBM cards	75				
		Number of rolls of calculator paper	225				

4. FINANCIAL MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
REVENUE	Dollars	Institutional Appropriations		Department appropriation	125,000	Private Gifts	2,500
		Restricted	125,000	Private Gifts	5,000	NOTE: It may not be meaningful to identify funding at this level	
		Unrestricted	25,000				
		Private Gifts	15,000				
EXPENDITURES							
CAPITAL INVESTMENT EXPENDITURES	Dollars	Land & Improvements	10,000	2 Friden electronic calculators	8,000	1 Friden electronic calculator	4,000
		Remodeling of student lounge	3,000	Individual armchair desks	750	Individual armchair desks	500
		Additional classroom space construction for East wing	10,000	Conference desks	600	Conference desk	200
		3 Friden electronic calculators	12,000				
		Individual armchair desks	2,500				
		Conference desks	1,000				
OPERATING EXPENDITURES		Building rental	75,000	Instructional supplies	2,000	Instructional supplies	1,500
		Instructional supplies	5,000	Salary, Professor	10,000	Salary, Asst. Professor	6,000
		Physical plant maintenance	10,000	Salary, Asst. Professor	6,000	Salary, Teaching Assistant	3,000
		Instructional salaries	71,000	Salary, Teaching Assistant	3,000	Other supplies & services	2,000
		Other supplies & services	7,000	Other supplies & services	3,000		
		Remote computer terminal rental	12,000				

5. ACTIVITY MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
Note: Subgroups are not identified for this program measures group.	As Specified	Number of graduate students enrolled in Business School	85	Number of graduate students in accounting	30	Number of undergraduate students in the course	90
		Number of undergraduate students enrolled	300	Number of undergraduate students in accounting	90	Number of special students in the course	8
		Number of special students enrolled	75	Number of special students enrolled	10	Weekly faculty contact hours	
		Number of graduate courses offered	4	Number of graduate courses offered	1	Lecture	2
		Number of combined upper division/graduate courses offered	2	Number of lower division courses offered	1	Lab	2
		Number of lower division courses offered	2	Weekly faculty contact hours		Weekly student hours	
		Number of degree programs offered		Lecture	2	Lecture	180
		Bachelor of Bus. Adm.	2	Lab	2	Lab	90
		Masters of Bus. Adm.	4	Seminar	3		
		Weekly faculty contact hours		Weekly student hours			
		Lecture	12	Lecture	180		
		Lab	5	Lab	90		
		Seminar	11	Seminar	90		
		Weekly student hours					
		Lecture	765				
		Lab	150				
		Seminar	235				

6. OUTCOME MEASURES

PROGRAM MEASURES SUBGROUPS	UNIT OF MEASURE	PROGRAM CATEGORY (BUSINESS SCHOOL)		PROGRAM SUBCATEGORY (ACCOUNTING DEPARTMENT)		PROGRAM ELEMENT (ACCT 100, COURSE)	
Note: Subgroups are not Identified for this program measures group.	As Specified	Student credit hours successfully completed		Student credit hours successfully completed		Student credit hours successfully completed	255
		Graduate	285	Graduate	90	Student credit hours not completed	15
		UD/Graduate	165	Lower Division	255	Students passing the course as a percent of those originally enrolled	94
		Lower Division	444	Student credit hours not completed		Number of special students completing this course	7
		Student credit hours not completed		Graduate	0		
		Graduate	6	Lower Division	15		
		UD/Graduate	15	Students passing the courses as a percent of those originally enrolled	96		
		Lower Division	21	BBA degrees granted	40		
		Students passing the courses as a percent of those originally enrolled	96	MBA degrees granted	5		
		BBA degrees granted	100	Number of special students completing accounting courses	9		
		MBA degrees granted	15				
		Number of special students completing accounting courses	70				

GLOSSARY

Term	Description
Activity Measures	Program measures that describe the process by expressing quantitatively the level and type of operations carried on within a program element during a stated time period (see Appendix C).
Assignable Square Feet (ASF)	For a single room, the sum of all areas located between the principal surface of the walls and partitions at or near floor level. Space occupied by alcoves, closets, and built-in shelves opening into and serving the room ordinarily is included.
Beneficiary Group Measures	Program measures that identify and quantitatively describe the people or groups of people who benefit directly or indirectly from either the activities or outcomes of a program element during a stated time period (see Appendix C).
Buildings	A kind of capital investment expenditure. Measures that reflect all costs associated with the acquisition or purchase of buildings in which the institution conducts its programs.

Term	Description
Capital Costs	Capital costs represent the valuation placed upon the services provided by land, buildings, and equipment owned and utilized by an institution during a given time period.
Capital Investment Expenditures	A kind of expenditure within the financial measures subgroup, "expenditures." Measures that reflect one-time expenditures for physical resources that will benefit a program for more than one operating period.
Common-Interest Group	A target clientele group having professional, employment, or similar interests in common, such as continuing medical education, C.P.A. review, etc.
Cost Finding Principles (CFP)	An NCHEMS project dealing with the development of alternative procedures for direct and full costing of programs as defined by the Program Classification Structure.
Course	An organized set of activities pertaining to instruction in a particular subject matter, which is conducted during a given period of

Term	Description
	time and for which credit toward graduation or certification is usually given.
Course Enrollment	One student enrolled in one course or one section of a course.
Course Level	The categorization, by institutional standards, for the level of offering of a specific course.
Data Element Dictionary (DED)	An NCHEMS project dealing with the forecast and definition of a set of data elements needed for operational, management, reporting, and exchange purposes.
Descriptor	A specific quantitative or descriptive indicator or a program measure.
Degree Program	The mix of instructional offerings in various disciplines which comprise the curriculum for a specific academic degree.
Equipment	A subgroup within the resource measures group; measures that quantitatively express the number of physical units of all movable

Term	Description
	property (that which is not permanently attached to a structure) that has a useful life of more than one year and a cost above an institutionally defined minimum utilized by a program element during a specified period of time. Also, a kind of capital investment expenditure within the financial measures group (see Appendix A, Section 3).
Expenditures	A subgroup within the financial measures group; measures that quantitatively express the dollar cost of goods delivered or services rendered, whether actually paid or unpaid, for the operation of an institution and for additions to its plant.
Facilities	A subgroup within the resource measures group; measures that quantitatively express the number of units of land, improvements, and building space required by the program element in conducting its activities.
Facilities Inventory and Classification Manual (FICM)	An NCHEMS project dealing with the development of appropriate resource and asset measures for facilities and the development of procedures for

Term	Description
	lodging facilities resource measures in the Program Classification Structure.
Faculty Activity Analysis (FAA)	An NCHEMS project dealing with the development of categorizations and definitions of faculty activities; procedures for lodging faculty measures within the Program Classification Structure; and instruments for collecting data on faculty assignments, activities, and workload. Also concerned with suggestions for planning and management analyses which can be performed on the collected data.
Faculty Contact Hours (FCH)	One hour spent by one instructional staff member in contact with a scheduled section.
Faculty Rank	The categorization of faculty positions as a function of a number of variables, such as responsibility, length of service, academic expertise (see Appendix B).
Financial Measures	Program measures that quantitatively express in dollar amounts the source of funds and expenditures for physical and human resources utilized at a specified level of activity within a program element

Term	Description
	during a stated time period (see Appendix B for source of funds).
Full-time Equivalent (FTE)	The equivalent of one person who is deemed to be carrying a full load or having a full-time appointment in accordance with an institutionally agreed upon convention for converting numbers of specific individuals (students or employees) to an equivalent number of full-time persons.
Grantor Agencies	Public agencies, such as the National Science Foundation, that grant funds for the conduct of institutional programs.
Higher Education Finance Manual (HEFM)	An NCHEMS project dealing with the definition and categorization of financial resources and asset measures necessary for planning, budgeting, and reporting, and the development of procedures for using the measures.
Higher Education General Information Survey (HEGIS)	The annual survey of accredited colleges and universities conducted by the National Center for Educational Statistics (NCES) of the U.S. Office

Term	Description
	of Education. Also, an NCHEMS project through which higher education institutions and associations advise NCES on the content of the HEGIS surveys.
Individuals	A target clientele consisting of individuals within the community at large, as contrasted to specific interest groups or community sectors.
Information Exchange Procedures (IEP)	An NCHEMS project involved with the development of standard procedures for exchange and reporting of standard institutional information; descriptions of selected analyses which can appropriately be performed on this data; and additional structures for organizing information which cannot be attached to the Program Classification Structure.
Institutional Benefactor	Private persons or agencies which provide funds to the institution to support its various programs.
Instruction Type	The categorization of the methods by which organized instruction is conducted, which reflects educational technology and the use of facilities, materials, and equipment.

Term	Description
Intra-Institutional Planning and Management (IIPM)	An NCHEMS project involved with the identification of the basic information appropriate for planning and management at various levels within the institution; the suggestion of methods of interrelating various decisions and types of information over time; and the suggestion of appropriate analyses and applications of the above information.
Land and Improvements	A kind of capital investment expenditure; measures that reflect all costs associated with the acquisition and subsequent improvements of land, except buildings, by the institution.
Manpower Accounting Manual (MAM)	An NCHEMS project involved with the definition and categorization of personnel resource measures and the development of procedures for lodging these measures in the Program Classification Structure.
Objectives	Specific ends to be achieved in the functional area of the goal which the objectives are designed to support. Once adopted, they connote intent to take courses of action to achieve them.

Term	Description
Occupational Activity	The principal ability or skill required by a work assignment.
Operating Costs	See Operating Expenditures.
Operating Expenditures	A kind of expenditure within the financial measures subgroup, "expenditures." Measures that reflect the expenditures for physical or human resources that are totally consumed or utilized by a program within one operating period.
Outcome Measures	Program measures that quantitatively express the outcomes achieved or the products generated by the activities of a program element during a stated time period (see Appendixes C and D).
Outcomes	An NCHEMS project involved with the development of structures, measures, procedures, and analyses appropriate for including the outcomes and impacts of postsecondary education in the postsecondary education planning and management process at the institution, state, and federal levels.

Term	Description
Personnel	A subgroup within the resource measures group; measures that quantitatively express in physical units the human resources utilized by a program element during a specified period of time. Also, a kind of operating expenditure within the financial measures group (see Appendix A, Section 1).
Primary Programs	Primary programs contain the activities directly related to the accomplishment of the missions of higher education.
Program	A set of activities which, operating collectively, achieves a well-defined objective or set of objectives of the institution within a stated time period. In terms of the PCS, a program is a stratum of the PCS hierarchy which represents the collection of program elements serving a common set of objectives that reflect the major institutional missions and related support objectives.
Program Budgeting	A resource allocation technique which facilitates the organization and identification of the activities of an institution in terms of its objectives,

Term	Description
	displays the cost of these activities over an extended time frame, and relates these activities and their costs to the outputs of the institution's programs.
Program Category	A stratum of the Program Classification Structure; an aggregation of program elements which may be used to sum related program elements across program lines.
Program Classification Structure (PCS)	A system which categorizes the activities of an organization in a program-oriented framework that relates these activities to organizational objectives.
Program Element	A discrete management unit that may be thought of as a collection of resources, technologies, and policies that through integrated operation produce goods or services (i.e., an output) of value to the organization because they contribute to the achievement of an institutional objective. Lowest level of the PCS.

Term	Description
Program Measures	Quantitative indicators of the resources utilized, the activity levels generated, the groups that were served and benefited, the expenditures incurred, the revenues generated, and the outcomes achieved by programs and program elements.
Program Measures Group	A major classification of program measures. Program measures fall into six major groups: Resource Measures, Financial Measures, Beneficiary Group Measures, Target Group Measures, Activity Measures, and Outcome Measures.
Program Measures Subgroup	A subdivision of a program measures group.
Program Sector	A stratum of the PCS hierarchy; a subgrouping of program elements within a program subcategory, which is primarily intended to identify the level of course for instruction program elements, but which may be used in other programs at the option of the institution.

Term	Description
Program Structure	A classification system which categorizes the activities of an organization according to their relationship to the organization's objectives.
Program Subcategory	A stratum of the PCS hierarchy consisting of a collection of homogeneous elements; a subdivision of the program category that classifies program elements relative to their discipline or functional purpose.
Resource Measures	Program measures that quantitatively express the physical and human resources utilized within a program element during a stated time period.
Revenues	A subgroup within the financial measures group. Measures that indicate the sources of the funds expended, e.g., student tuition and fees, governmental appropriations.
Standard Room Use Classification	The classification of room facilities by intended usage rather than by room type (see Appendix A, Section 2).

Term	Description
Supplies and Services	A resource measures subgroup; measures that quantitatively express units of supplies and services resources utilized within a program element during a stated time period. Also, a kind of operating expenditure within the financial measures group that encompasses the management of supplies and services resources in financial terms (see Appendix A, Section 4).
Support Programs	Support programs contain those activities which are necessary or vital for the successful operation of the primary programs.
Target Group Measures	A program measures group. The measures that identify and quantitatively describe the people, places, or things to whom or at which the activities of a program element are aimed or directed during a stated time period (see Appendix C).
Weekly Student Hour (WSH)	A unit of measures which represents one hour of instruction given to one student in one week.

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